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SCHEANINGS IN BEE CULTURE

A JOURNAL DEVOTED TO BEES AND HONEY AND HOME INTERESTS

ILLUSTRATED SEMI-MONTHLY

Published by THEAI-ROOT CO. \$100 PER YEAR MEDINA OHIO.

VOL. XXVII.

SEPT. 1, 1899.

NO. 17.



I DON'T KNOW of any way in which a bee-keeper can get more comfort out of ten cents than to spend it for a pound of saltpeter, put that in two or three quarts of water, wring rags out of it, dry them, and cut them up into pieces of 20 to 50 square inches, to be tied up into little rolls to start his smoker.

IF IT'S RIGHT ever to bear the market, surely it is when the market is as bare as now. There's no sort of justice in commission men prejudicing the market by starting out with prices that fit a year or so ago. Prices in general are advancing, and a short crop doubles the reason for an advance. Those commission men and dealers who have put up their figures are showing sense. [Yes, and common cents too.—ED.]

HENRY ALLEY says: "Remove the queen from a hive, and the bees will in no case start a cell-cup around an egg, but always select a larva two or more days old." The only exception I have known is when eggs only are present. I formerly thought they would wait in that case till the eggs hatched out, but this summer I saw at least one case in which a cup was plainly formed about an egg, nothing but eggs being present.

REGARDING that queen about which you inquire, Mr. Editor, p. 603, her bees have filled 132 sections, and have a few pegs driven in a fresh super. She's two years old, wintered well, good-natured, but she's a hybrid. Spoils her as a reliable breeder; but if she holds her present record I'll breed from her for all that. [A hybrid would not do for a breeder. Her stock would run all the way from almost black to quite yellow bees. That is, I mean that the bees of her daughters would show such variation.—ED.]

SPEAKING of measuring with a micrometer, you say cells vary, and ask, "How are we going to prove any thing by measuring?" That's easy. Take a piece of freshly built comb, and another of 25 years, each measuring the same

number of cells to the inch, and the difference in diameters will exactly measure what 25 years' use has done. See? [Y-e-s. At all events, send on your 25-year-old comb, and I will try to give you within the ten-thousandth of an inch the difference in measurement found.—ED.]

IN A FORMER NUMBER I referred to J. J. Cosby's way of using the Doolittle plan of queen-rearing, p. 303, and feared in-breeding by using the same mother for drones and queens. I thank F. L. Thompson for calling attention, in *Progressive Bee-keeper*, to my error. A more careful reading shows that Mr. Cosby has drones reared by the queen of the hive in which the cells are stored, the larvæ for queen-cells coming from elsewhere. His plan of having a best queen in his store-hive, and furnishing hybrid brood from elsewhere, is fine.

EDITOR HUTCHINSON says his bees don't do as mine do. His start all cells at nearly the same time, and so nearly of an age that they emerge from the cells within the same two days. As he's a queen-breeders and I'm not, that shook my confidence in my own observations. But that veteran queen-breeders, Henry Alley, who has reared many more queens than both of us put together, says I'm right. He says: "When I have removed a queen from a colony for the purpose of introducing another, I find, after waiting three days, cells nearly ready to cap, while there are others just started."

DECIDEDLY, I like those organ-key springs to squeeze together sections in super. Please tell us who conceived such a bright thought. [Those super-springs, as you found them in the supers, were devised by Mr. Fr. Danzenbaker. He got the principle, I believe, from Mr. M. H. Mendleson, of California, who uses a flat steel spring. It is more expensive, and not as well adapted to the purpose. From some correspondence that has come in of late, it seems others have been using something similar. But Mr. Danzenbaker says he was prior in the specific form of springs used in his supers.—ED.]

YOU'VE TRIED drone-cells, Mr. Editor, and bees with a laying queen don't take to them

for queen-cells; and you ask, "Why should they start with drone-cells?" Let me in turn ask, "Why should they start with worker-cells?" for you seem to ignore my statement that bees with a laying queen will start queens in worker-cells supplied with jelly. Not always; neither do I always succeed with Doolittle cups. [You say, doctor, that "bees with a laying queen will start a queen in a worker-cell supplied with jelly." They do not do that way down here in Medina—at least I never observed it. I will assume that they *may* do so; but even then I should be under the impression that it was only under special conditions.—ED.]

THE NOVICE may be a little muddled with a brace of errors in that footnote, p. 606. Second column, second paragraph, says "prepared drone-comb cells." That's mixing in Jones and Fooshe. Alley uses worker-cells, not drone-cells. At top of p. 607 is said, cells may be put in any strong colony providing it is stimulated, "if honey is coming in," meaning "if honey is *not* coming in." [A bee-keeper *might* understand what I meant. I did not mean to say in the first instance *drone-comb* cells. I meant to put in its place "worker." In the next instance, the word *not* should surely have been in. With these corrections the novice will get my meaning a little better.—ED.]

YOU SPEAK, Mr. Editor, of getting cell-cups accepted with the *food of the ordinary worker-cell*, as if there was a difference between that and royal jelly. Have you forgotten that, during the first three days, workers and queens are fed on the same *kind* of food, there being a difference in quantity, and that the workers are weaned at three days while the same food is continued to the queens? So it's all the same whether the food be taken from queen larvae or young worker larvae, if the same amount is taken. [Yes, I remember something to that effect; but why is it that Doolittle and all the others recommend taking royal jelly in preference to any other food? Or is it the fact that Doolittle and the others have not yet discovered that the food of three-day-old larvae is the same as that for the larvae of queens?—ED.]

I WEAKEN on the matter of the shape and size of cells having something to do with bees starting queen-cells. If you get a queen cell started in an artificial cup, using only the food of worker larvae, and giving only the *same amount* as is found in a worker-cell, then that helps to prove that the cell has much or all to do with it. But the force of the argument is weakened by the fact that in the same place the bees will often start queen-cells on their own account out of ordinary worker-cells. If with the regular worker ration you get cells started in *every case* in the artificial cups, then that's clear proof of the effect of the cell-cups. [But is it the rule, doctor, that queen-cells will be started in a colony having a normal queen? You will not forget that these Doolittle cell-cups will not only be begun upon, but actually finished, in such colonies. Those having a supersedure queen will accept almost

any thing; but I would not go quite so far as to say that cups rationed with worker food will, as a rule, be accepted where there is a normal (not supersedure) queen, because we do not know yet until we test the matter further.—ED.]

THE STRANGENESS of the season continues—bee-starving in June; white clover abundant, but no storing till after the middle of July; then very slow but steady storing till about Aug. 10, when clover seemed to disappear suddenly; but the slow steady storing kept right on, and Aug. 17 finds piled in the house about 25 finished sections per colony, with nearly as much more on the hives, filled and ready to seal, but the bees are slow about sealing. The honey is of the very best, but I don't know what it comes from. There's some sweet clover and unlimited cucumbers, but we haven't been in the habit of crediting cucumbers with such nice honey. The greenish pollen suggests red clover, but all the farmers say there isn't a field of red clover in this region—all winter-killed—only there's some on the roadside. If this thing keeps up long enough I'll report a good crop by Christmas. [Some four or five years ago, if I remember correctly, you had a season exactly like this. Most localities are not quite so accommodating. If clover does not yield by the middle of July, usually no clover honey is expected. You remember I once advised you, doctor, to leave your locality and go where there were basswoods. I will withdraw that advice.—ED.]

A SURPRISE has met me. A dozen or so supers were filled with sections, one side old-style sections with plain separators, the other side with plain sections and fences. In every case where there was a difference, and I think there was a difference in every case, in some cases a marked difference, the difference was in favor of the old style, the bees beginning sooner and finishing sooner. I don't understand it. I could understand it if there were no difference, but why the bees should do worse with freer communication is beyond me. Is it pure prejudice on the part of the bees? [This is indeed a surprise when most of the reports have seemed to be the other way. But in the interest of fairness and truth, I desire that this item should be as widely circulated as the items of the other character. If there is any advantage in a solid separator, such separator could be used with the plain sections; but in that case it will be a cleated separator. But plain sections with the same filling are preferred by the buyers. I take it that you yourself are partial to tall sections, from what you say on page 601, and that you are afraid that you will have to adopt them. Is it the tallness or the general appearance of the boxes, or what, that makes you think that way?—ED.]

EXAMINATION made by you, Mr. Editor, showed that $\frac{3}{4}$ of the cases of travel-stained sections had the stain clear through the capping. I'm not prepared to dispute that all the dark cappings of my sections are dark clear through, but here's what I know. I know that, when a super is left on long

enough over black combs, the lower part of the central sections becomes dark, and 100 per cent of those dark sections were at first capped white. If they're dark clear through, then the bees have a way of soaking the color through the white capping. Isn't it just possible that, in your examination, the dark color shone through the white layer? I wish you'd come to Marengo and fight out some of these things with me. I had just a lovely time fighting with Hutchinson when he was here. [Mr. Crane and I looked over a good deal of the honey that was travel-stained, and I afterward examined the lot after he went away. My own individual conclusion, as well as that of Mr. Crane, was that this stain went clear through the capping. I took a magnifying-glass and two needles to dissect some pieces, and I do not see how I could be mistaken in believing that this travel-stain went clear through. Again, as a further proof I bathed with a rag dampened in gasoline the surfaces of several sections of comb honey; for you know gasoline and benzine are solvents of wax. I washed gently quite a number of sections until the cappings were almost gone, leaving a mere gauze covering; and yet that travel-stain was there just the same, thus showing positively that the coloring-matter was not on the surface but *all through* the capping.—ED.]



Dryer! higher burns the fire
Of these August days;
Fields are parched and pastures wilted
By the noon tide blaze.



BEE-KEEPERS' REVIEW.

In speaking of the arrangement of hives in an apiary, J. E. Crane lays stress on having them protected from the wind. He says it is hard to realize how much damage a strong draft of air through a yard of bees will do. He has had, in one or two cases, almost every colony die, during the winter and spring, on one side or end of the yard where there was a strong draft of air. He thinks the six-sided (hexagonal) plan very nice on paper; but after trying it one winter he found, the following spring, the central part of

- the yard greatly weakened by bees missing their own hives, and there was a great loss of queens. He now uses a plan like that shown in the diagram. Mr. Crane has planted a basswood in the center of most of the groups. The upper group faces north. The first at the top is No. 1, and so around as the hands of a clock move. Mr. C. insists strongly on numbering hives.



Our old friend H. G. Quirin (he seems to be about 20 in the picture), of Bellevue, O.,

relieves the monotony of life by giving us a bird's-eye view of his place. The country there is very level. In the lower half of the cut we see an open field with about 25 hives in it; beyond that is a larger number in an orchard. The telephone from New York to Chicago is seen in front of the yard, and it also goes equally near the Home of the Honeybees, forming a connecting-link between us. Wire we not neighbors?



After writing the above I find I am reviewing a somewhat "ripe" number; but the story is too good to lose. I'll examine my dates and figs closer hereafter.



AMERICAN BEE JOURNAL.

On page 497 Mr. C. P. Dadant argues in defense of barrels, after an experience of thirty years. He agrees with Editor Hill when the latter says: "I have used a number of car-loads of tin cans as honey-packages, and have found the percentage of loss through leakage greater than where barrels are used." The excessive dryness of some States seems to render tin more desirable than wood. Probably the trouble attributed to barrels is owing to the unseasoned condition of the staves, the honey absorbing what water they do contain, thus causing shrinking. On the other hand, doubtless tin cans are made too large for the strength of the soldered seam, and hence a leak results. With care, both materials, tin and wood, have their places.



Mr. York is working with commendable energy to make the Philadelphia convention a good one. Mr. York and Dr. C. C. Miller go together, starting Sept. 4.



Mr. York quotes an article from the *Michigan Farmer*, written by Geo. E. Hilton, suggesting that ministers keep bees. The chief objection would be that most of them live in large towns and cities, and they can all truly say, "We have here no continuing city." Churches nowadays change their preachers as often as the fashions flop about.



A correspondent inquires in regard to hunting bees during a honey-flow. Another says, in reply, "Go where you have reason to think the bees are, and find them at work on water. When they leave the water they will not circle, but go straight to the tree. Generally they get water at the nearest point, so if you are a mile from tame bees you may rest assured they are wild."



A month ago I referred to the fact that Mr. York addressed one of the Chicago schools on the subject of bees. His remarks were to be printed in a little paper issued by the scholars. Miss Anna Sundberg, a girl of fifteen, gave the following synopsis of Mr. York's talk. It is all from memory, and certainly shows much skill. She also made some fine sketches, which, of course, I omit. Here is the clipping:

BEES.

Thursday afternoon Mr. York was in our room, and told us a great many interesting things about bees. There are three kinds of bees; the queen, the workers, and the drones. The queen is long and narrow. She lays all the eggs in the hive, but never gathers honey nor goes where the surplus is stored. Her food consists of a finer quality of honey, called royal jelly. The worker is like the queen in every way except two. The first is that the lower part of its body is shorter; and the second is, that its work is different. It gathers the honey and pollen, which it stores away in the cells. The drone is larger and broader than the worker. It does nothing but eat and sleep.

The pollen is stored in the lower part of the hive, and here the queen lays her eggs. One egg is put into each cell. After the egg has been laid, and food put in for the larva, the workers plaster up the opening of the cell. There is some difference in the covering of the cells. Those of workers are flat, while the drone-cell caps resemble mass of bullets, and the entire queen-cell is different. Her cell looks like a bag, and is shaped somewhat like a peanut. A few days after being laid, each egg is transformed into a small, pearly-white larva.

The queen develops in 16 days, the worker in 21, and the drone in 24. The workers seldom lay eggs; but when they do, only drones are produced.

Bees will gather honey for several miles around. The bee flies around the hive several times before it leaves, and when it comes back it flies to a certain height, and then in one straight line to its home.

The drones have no stings. The worker dies after using its sting, and the queen uses herself in killing a rival, if she has any.

There are about 40,000 bees in a hive, and a strong colony of bees will store about 100 pounds of honey in a good season.

When the hive is overcrowded, the queen and a great many of the workers fly away and settle on the branch of some tree. This is called swarming, and causes a great deal of excitement in the hive when it happens.

ANNA SUNDBERG.

Who can estimate the good that may result from Mr. York's talklet before this school?

AMERICAN BEE-KEEPER.

Mr. J. L. Lattimer argues for the old-style section as against the plain. He says if both kinds are put on the table for sampling, the old style will be taken first as it has a neat oval appearance, while the plain sections will have a mussy appearance, caused by the honey flowing from the outside cells, very much as a piece of chunk honey would look on a plate. Oh dear! how easy to assume as fact what we imagine to be the truth. Mr. L. should have added a clincher, to the effect that the cook is sure to let grease spatter all over plain sections while the old-style ones always escape that dire calamity. How many housekeepers would think of putting two sections of honey on the table at a time? and how many would put on even one without first throwing the section into the stove? I confess I am unable to see why people should show so strong a preference for plain sections as has been reported in these columns time and again; but the preference is there, and it is just contrary to what Mr. Lattimer would have us believe, and that, too, without "puffing." Of course, those who buy honey to sell are wise in selecting that which sells best; but in buying it to eat I would pay no more attention to the section than I would select a coat according to the color of the box the manufacturer packed it in.

BRITISH BEE JOURNAL.

I quote the following from our British contemporary :

We deeply regret having to record the death, under very sad circumstances, of Mrs. Chapman, wife of Mr. F. Chapman, of The Dairy, Wells, Somersetshire, well known as a successful bee-keeper and exhibitor. It appears that, on the evening of Wednesday, July 19, Mr. Chapman, accompanied by his wife and sister, went, by request, to the Lunatic Asylum, Wells, to inspect the hives there. One of the medical officers (who is himself a bee-keeper) accompanied them to the apiary, and nothing unusual occurred while the hives were being examined. This done, the party returned indoors. A bee apparently followed them in, for while in the corridor the insect got into Mrs. Chapman's hair; she became somewhat alarmed, and, as might easily happen under such circumstances, the bee stung her on the head. This further increased Mrs. Chapman's excitement, but the sting was extracted, and the party all walked down the corridor into one of the wards; here Mrs. Chapman fell into a faint, and, notwithstanding the joint efforts of the medical officer and her husband, she never recovered consciousness, but died in about ten minutes.

The coroner made an examination, and found death due to a defective valve in the heart, the excitement of the sting causing a failure of that organ.



NOTES FROM AUSTRALIA.

Drone-cell Queen-cups; a Practical Method of Clipping.

BY H. L. JONES.

Apiculture has been with me a life-long occupation; and if there is one branch that I am better versed in than another it is that pertaining to queens and queen-raising; and it is on this subject that I wish to have a little chat.

DRONE-CELL QUEEN-CUPS.

Two years ago you published and gave illustrations of my method of queen-raising, and expressed your intention of giving the method a trial in your apiary; but until Mr. Wardell came along and made a success of the Doolittle cell-cups, nothing more was heard of your queen-raising operations. Mr. Wardell, however, still uses the dipped cells, and I can not imagine how you progressive Yankees, with your love for labor-saving methods and short cuts, still prefer the dipped cells to the *more rapid* and just as effective drone-cell method outlined in my article in GLEANINGS, May 15, 1897. I have raised some thousands of queens since that article was written, and still prefer drone-cells to the dipped ones. Request Mr. Wardell to try this method, and report for the benefit of your readers.

CLIPPING QUEENS, FROM A BREEDER'S STANDPOINT.

I was pleased to note, a year or so ago, that you had seen the error of your ways, and had become a convert to queen-clipping. I have practiced this for more than 13 years, and I do not know a single objection that can be legitimately urged against it, while the advantages are many. But, aside from its importance to the honey-producer, the practice is of even

greater value to the queen-breeder—a claim for clipping that I believe has never been made before. Now, *every* breeder will receive a complaint occasionally; and whenever I receive a bad one I send on another queen at once, and ask for the return of the unsatisfactory one; and on several occasions I have had queens returned with perfect wings in place of the clipped queens sent out. Of course, the first queens had been lost in introduction, and supplanted by worthless queens, unknown to the purchaser. In our printed directions for introducing queens we say, "Be sure the colony is queenless;" but peculiar and unexpected conditions prevail in colonies at times; and the novice, and some of more experience, also, occasionally attempt to introduce a queen to a colony that already has a queen of some sort, with the result that the choice queen is destroyed, unknown to the purchaser, and the breeder's reputation suffers as a consequence. Now, clipping is a grand check against mistakes of this kind; and if part of one larger wing only is cut, the appearance of the queen is but slightly impaired, and frequently the purchaser fails entirely to note the clipping.

BEST METHOD OF CLIPPING.

I don't like the method of clipping that you described some time ago, and I believe that, if you give the following plan a good trial, you will admit its superiority: Grasp the queen by the wings, and place her on the top of your left fore finger, which she will eagerly grasp; then bring your thumb down on her legs, and you will have her as securely as if in a vise. There will be no danger of her legs getting between the scissors, which should be slipped under the longer wing on only one side. The whole operation takes but a few seconds, and the queen can be liberated right on the combs by simply taking the weight off her legs, and she hardly knows that she has been interfered with, as her delicate body has not been touched. In clipping one wing only, it is advisable to clip it fairly short, as I have known queens to fly when the larger wing was clipped a little shorter than the under one.

WAS THE METHOD OF CLIPPING RESPONSIBLE?

I wish now to mention something very peculiar and unusual in regard to some drones that disported themselves in my apiary about nine years ago; and as I have never heard of any thing similar I should like your opinion on the matter. At the time mentioned I used to clip *both* the *larger* wings of my nice yellow queens pretty short, as this left them with a fine symmetrical appearance, and showed their beautiful color off to its best advantage; but, to my great surprise, several of these queens produced drones with unnaturally short wings—the upper wings, in fact, being no longer than the lower ones, so that much of the drone's body was exposed. In every other respect these drones were perfect, and could fly all right; but instead of the loud buzz-z-z of the ordinary drone, the sound they made was more of a buzz-z-z. If you will clip the two upper wings of a drone to the length of the under ones, and let him fly, you will have the sound exactly. There is no mistake what-

ever about the facts above, as I noted down every thing most carefully at the time, and have been watching without success ever since for something similar, but can assure you that I now clip the wing on only one side.

AGE AT WHICH QUEENS BEGIN TO LAY.

One more subject, and I'm done for the present. Why is it that so many of your American works place the age at which queens commence to lay at so early a date? I keep a very complete record in all my queen-raising operations, from the date the larva is inserted to the time the cell hatches, queen commences to lay, etc., and I find from long and careful observation that, on an average, the queen begins to lay when about ten days old, and I have never known a queen to lay *under* nine days. Most of your American works put it from six to eight days, while English writers, such as Taylor, Neighbour, Cowan, etc., put it much earlier still; but Cheshire comes nearer my estimation, and puts it at nine days. In that beautiful little work, "*The Honey-bee*," Cowan puts it from five to seven days; but those figures most certainly will not hold good for this part of the world. Doolittle has it from seven to nine days; but there's some comfort to me in the fact that the two medical gentlemen, C. C. Miller and J. P. H. Brown, are alongside of me with the ten-day average.

Goodna, Aus., May 25.

[We did try the drone-cells, but were no more successful with them than we were at that time with the Doolittle cell-cups; but our Mr. Wardell has made the latter method so very successful that we hardly see how there could be an improvement, nor even a saving in labor. Yourself, Mr. Alley, and others, it would appear, in many cases at least, are obliged (or at least find it more practicable) to place these drone-cells filled with royal jelly *first* in queenless colonies, after which they are removed and placed in the upper story of strong colonies possessed of a queen. Now, right here it seems to me an amount of labor is involved that more than offsets the small amount of time consumed in making cell-cups, especially when it is understood that one with even crude methods can make at least a thousand such cups in a day. See answer to one of Dr. Miller's Straws in last issue.

Now, understand I do not claim that these drone-cells with royal jelly will not be started in colonies having a queen; but from what you and others who use the method write, I take it that you will generally find it necessary to use queenless colonies to start them in cups.

Your point with regard to marking your queens by means of clipping, so as to avoid mistakes, is a good one. Every year we have been obliged to replace queens that I felt morally certain were all right, but which I suspected were destroyed by the bees, and their place taken by inferior queens already in the hives. Your plan of requiring the return of such queens would give a means of determining whether any mistake had been made; and, what is more, it would determine

whether some unscrupulous customer was trying to take advantage by misrepresentation.

Your method of clipping queens' wings may have been described before, but if so I do not remember it; but it strikes me as being one of the simplest yet proposed. But one will have to be careful and not pull too hard on the delicate legs of the queen; and then if a nervous twitch of the fingers should release the legs, then good-by queen.

With regard to the age at which queens begin to lay, this may be somewhat a matter of locality. One year I kept a careful record, and I found that queens began to lay, after hatching, all the way from 5 to 20 days. I had only one case where the queen laid within 5 days from the time of hatching from the cell; but a large number of them laid within 7 days; but the average was about 8 days. The five-day laying may be accounted for by the fact that the young queen in such a case had been confined in the cell, as Doolittle tells about, and consequently she matured while in the cell, and in a sense was more than 5 days old at the time of laying. When we were rearing queens with Holy Land stock I had one case where a queen flew immediately after emerging from the cell. The probabilities are that this queen had been confined in the cell, and very likely had been fed through the end of the capping; and when she was finally released, by pushing the head off while I had the hive open she popped out of the cell like a shot out of a gun, and flew a distance of six or eight feet, when I caught her. Since that time I have had other instances where the queen flew four or five inches, and then dropped down on the comb or on the ground. Now, if it is a fact that the bees confine the queens in queen-cells after the regulation day of hatching, this would account for the conflict in testimony as to the exact time when young queens are mated.

In speaking of the raising of cells, the Holy Lands are away ahead of any other bees in the world. But I do not want them for any thing but raising cells. They breed in season and out of season; indeed, they will breed themselves to the point of starvation, without let or hindrance, and sting worse than Italians. They are less hardy in winter, and are the worst bees in the world for fertile workers. Their one predominating propensity is to breed first, last, and all the time. But that one propensity can be made very useful to a queen-breeder if he can confine the blood to one colony, or at most to the requisite number of cell-building colonies.—ED.]

SHORT-WEIGHT SECTIONS.

Five-gallon Square Cans Condemned; Retailing Honey by the Gallon; Honey-pitchers.

BY THE AMERICAN TRAMP.

Hide not thy light under a bushel. About a year or so ago there was some discussion in GLEANINGS as to the best package for retailing honey. I was in hopes some bee-keeper would rise and tell it, but it seems to me that

there are none who know it; for, if I remember, when the discussion reached the tomato-can it stopped short. Now let me find fault first before I tell you all I know. Bee-keepers are very foolish to sell their comb honey by the pound. The proper way is to sell it like the retailers, by the section. While in Florida I sold all my comb honey by the section, direct to the retailers. When I first started in, here is about the way I was met by the grocers:

"That's very nice honey; how much do you ask for it?"

"I want 12½ cents each."

"Well, but they don't weigh a pound."

"I did not say they did."

"But honey-sections are supposed to weigh a pound."

"Do you sell them by the pound?"

That generally settled it. There was no more said. My sections were $4\frac{1}{4} \times 4\frac{1}{4}$, seven to the foot, and weighed about 13 ounces each. They sold right along side by side at the same price with the six-to-the-foot sections.

Now about the square five-gallon cans for extracted, which I think E. R. R. pronounced the best package so far. Now, I don't believe that he ever handled any personally or he would not call them good. I remember I started one day with three gallons of honey in one of them for a private customer. I had to drive ten miles over a Florida sand road. When I got to my journey's end it was hard to tell where the most honey was—in the can or in the wagon-box. In filling a five-gallon can it's a good man who will not spill from a pint to a quart doing it. Here is something else to study over. Putting up honey in five-gallon cans lessens the sale of honey. How? Well, I'll tell you.

I sold all to the retail trade, and made it a point not to sell the cans, taking away the empty cans, replacing them with full ones. Whenever I come into town I pick up my empty cans to carry home. One day I stopped in to one of my customers to take back the empties. He laughed, and told me that honey was getting to be a drug on the market. The cans were all full yet; he had not sold any of it. Two days afterward I was in the same store, and, while waiting to be waited on, I heard a lady ask for honey. The clerk said they had none. After the lady went out the same clerk waited on me. I said to him, "You must have had a big run on honey yesterday." He looked at me, but evidently did not know me, and asked me why. I said, "I heard you tell that lady that you had no honey, and Mr. E., the proprietor, told me two days ago that he had not sold any of the last lot I brought."

"Well," he said, "we have it all yet, but I do not want to mess up every thing pouring it out of those cans."

Did I wait and tell the proprietor about it? Well, no; because I always felt as did the clerk about those five-gallon cans. But I went out and thought a big think. The conclusion was, when I went home I carried back with me six empty ten-gallon whisky-kegs and six honey-gates. I cleaned the kegs inside, and painted them outside; put in a hon-

ey-gate and vent-plug ; filled them with honey, and brought them back to town ; left one at each store. The effect of this was, it increased my honey sales wonderfully. After once using these kegs you could not give away honey to these grocers, in a five-gallon can.

My idea for retailing honey by the gallon is a ten-gallon keg, made either out of wood fiber or paper, with a neat crate around it. This package is to be returned by the grocer. Placing this package on the counter, with a neat label on it, advertises the honey, and is a pleasure to the grocer in selling.

fiber top or cork. Eddy & Eddy, of St. Louis, put up mustard in such a package, and I think this package is the most suitable, for many people would buy the first pitcher of honey for the pitcher's sake.

I write this in hopes that you will think it over and get up a nice cheap honey-pitcher and wood-fiber honey-keg at a reasonable price. I feel sure these two styles of packages are ahead of what we have now. The honey-keg needs a nice smooth crate around it, made so the grocer will have to remove only one slat, screw in his honey-gate, loosen his vent-plug, and be ready for business.



WIRING THE CATCLAW SHRUB, TEXAS. SEE PAGE 651.

There is another benighted way we have of selling honey ; that is, in glass tumblers (jelly-glasses). If you fill these the honey will work out and soil the labels, then no sane person will ever buy the second glass of honey, because it is worth more to take the cover off than honey-glass and all are worth. Nine times out of ten you chip the glass in taking off the cover, and, of course, the pieces of glass go into the honey, or at least we think so. As a chicken is about the only bird that can digest glass, we either throw the honey away or spoil ten cents' worth of linen to strain five cents' worth of honey. What shall we do for this class of trade? My ideal small package would be a nice glass syrup-pitcher, pint and quart size, either with metal top or a wood-

[It is G. W. York, editor of the *American Bee Journal*, who is arguing for square cans as against kegs and barrels ; but as I agree with him in the main I come in for my share of your criticisms.

In the first place, let me say that Mr. York, although it is not generally known, handles large quantities of extracted honey. Indeed, I venture to say that he has had considerably more experience with square cans, and kegs and barrels, than any dozen average producers all together, and his verdict is emphatically in favor of the tin packages.

One of your objections to the square cans is the difficulty of getting honey out of them ; and that, therefore, the dealer will not sell from them because of that fact. Why, my

dear sir, square cans have honey gates the same as kegs and barrels ; and the matter of convenience in retailing is, to my notion, far ahead of the leaky wooden things. Nearly all of the dealers' catalogs will be found to illustrate a very neat little honey-gate for square cans, costing fifteen cents, or mailed for three cents extra for postage. Every user of square cans should supply his grocer with one of these little gates ; then the operation of drawing a pound, a quart, or a gallon, is as simple as putting up so much sugar.

Now let me suggest that you put your honey up in square cans again, and supply your grocers with these little gates ; and if they don't ask you to bring the honey in future in such packages, then I shall miss my guess.

In regard to honey in tumblers, while it is true that this sort of package is more liable to be daubed than any other glass receptacle, yet all or nearly all of this daubiness may be avoided. Tumblers should not be filled any fuller than within a quarter of an inch of the top ; and then the top should have inserted in it paraffine paper, which, when crowded down with a slight blow of the palm of the hand, will usually make a package almost honey-tight. To make it perfectly so, paste a red or yellow label around the edge of the cap.

It is true, there are self-sealing glass packages that will not drip or leak ; but these cost so much more that the producer or dealer hesitates about paying the extra price.

Your idea of a syrup-pitcher is all right. We sold some a few years ago, but we had difficulty in closing out the stock. But if the scheme were worked right, pitchers of honey might sell very readily and easily. One trouble with a good many of the glass packages is that they have served their usefulness as soon as the honey is out of them, and that is one reason why the consumer hesitates about buying glass when he does not need it. But this objection does not hold against Mason jars or honey-tumblers as a rule. The one is useful for storing jelly, and the other for cooked fruit.—Ed.]

GRADING AND CLASSIFICATION OF COMB HONEY.

Simple Rules Preferable to those more Elaborate ; Fewer Grades ; Suggestions for the Philadelphia Convention ; does Extracting have a Tendency to Make Honey Granulate ?

BY WM. MUTH-RASMUSSEN.

For the benefit of those who may not be familiar with this subject, I will say that, in judging extracted honey, only the term "grading" is used, and applies to the color as well as to the body (specific gravity) and flavor of the honey, though, as a rule, in the general market it is the color that mainly governs the price. On the other hand, in judging comb honey the term "grading," by common consent, applies only to the filling, finish, and general appearance of the comb, and, to some extent, to the section or wooden

frame within which it is built ; while the word "classification" has reference to the color of the honey contained in the comb, or to the plant source from which it was gathered by the bees. In a general way the word "grading" includes "classification" as regards comb honey, as, for instance, where I further on, for want of a more distinctive term, speak about Niver's nine grades. But the word "classification" is never used instead of "grading."

I have just read your conversation with S. A. Niver in Aug. 1st number of GLEANINGS, and, previous to this, I had read all the published articles, discussions, and comments on grading as they appeared from time to time in your paper. I have tried to follow the grading rules, as agreed upon, as closely as possible. While it has given satisfaction to myself, and elicited commendation from my customers, yet many regard such close grading as unnecessary, and the dealers will, as a rule, not pay any thing extra for much distinction in grading, but prefer as few grades as possible. Look at the market quotations in the bee-papers, and you will find but two or three grades quoted instead of nine, as Niver would have it, or even more, by including "extra fancy" according to your notions.

A large firm in a city west of the Mississippi River has an agent here, buying up comb honey by the carload. They will have and pay for only two grades, which they call No. 1 and No. 2.

Though I have been so particular with the grading of my honey that I would not trust anybody else to do this work for me, still I do not see that I get any more for it than my neighbors who do not take so much pains. The "grading," however, is all right if sufficient latitude is allowed, as no two sections are ever exactly alike.

But even more important than grading is the classification of the honey by color. The grading only serves to please the eye more or less, but the color of the honey within the comb is the only means by which the buyer can judge of the quality of this honey until he has bought it and is at liberty to taste of it.

My honey-room has but a single window. When grading my honey I stand before this window, with the door closed behind me, and no light enters except through the window. Each section is held up to the light, and the color of the honey compared with that in several sample sections standing on top of the lower sash. As soon as the door is opened, and the light strikes that side of the section which faces into the room, the color of the honey can be seen only indistinctly.

I know bee-keepers who never look *through* a section in this way. They judge the honey merely by the outside appearance. If the capping is white they call it No. 1. If the capping is a little off in color, the section goes into the second grade. For that class of bee-keepers two grades are enough, and they ridicule the idea of going to any further trouble.

As a rule, honey is classed as "white,"

"amber," and "dark ;" and sometimes or in some localities a class called "light amber" is allowed. You are, however, aware that there are a great many different shades of these respective colors, and, in classifying my honey, it has been one of the hardest tasks to decide into which class each particular section ought to go. Inclination says, "This is good enough to be classed as amber." Conscience answers, "If you were buying it you would call it dark." Reason says, "The public is not as discriminating as the producer; and while some might call it dark the majority would not know the difference, but would take it as amber." Here I stand between three advisers, each good in his way. Which one shall I follow?

When I lived in Southern California I sent a shipment of extracted white-sage honey to a commission house in San Francisco. According to my honest judgment this honey was white, though I knew it was not water white. On receiving returns I complained of the low price obtained for white honey. The commission man answered that the honey was amber. Well, he had the honey; it was, presumably, sold, and there was nothing left by which I could prove that I was right.

Now that the question of grading has received considerable attention, though not yet a settled matter, I think it would be just as important for the bee-keepers to have some fixed rules for classification. The grading can be taught to a certain extent by pictures in black and white, but not so the classification by color. A few years ago I requested you to send me samples of the darkest shades that would be allowed as white and amber. You did so, but stated that the samples were not exactly what you would prefer, but were as nearly right as you could select them from material on hand at the time. I see that your Mr. Boyden is making a collection of samples of different honeys, and I would suggest that he send his collection to the U. S. B. K. convention to be held in Philadelphia, and that everybody, if possible, who attends this convention, also bring samples of all the different shades and colors of honey that can be obtained. Then let this representative body of bee-keepers decide what shall be the darkest shade of white, light amber, and amber, allowable; also, if light amber is excluded, what separate shades of this color may be allowed as white, and which must go as amber. When the matter is decided, let the A. I. Root Company put up samples in small vials, inclosed in mailing-blocks, plainly marking each sample as darkest white, darkest light amber, or darkest amber, and offer these samples for sale at a nominal cost, so that every honey-producer, and, if possible, every honey-dealer, would desire to have a set of them. Then we should have a definite standard to judge by, which would obviate many disputes and much dissatisfaction in buying and selling our product. Give printed directions for liquefying the samples, particularly for the sake of dealers who may not know any thing about it. If possible, let representative honey-dealers have a voice in fixing the rules for

classification. While there may be changes in the shape and dimensions of the section, and while the filling and finish of the comb are largely dependent on the honey-flow and on characteristics of individual colonies of bees, so that grading-rules can never be fixed with mathematical exactness, the classification by color, on the other hand, can be fixed within certain unchangeable limits if the bee-keepers will only agree upon them. It would be well done if the U. S. B. K. A. had such a set of standard samples, with which comparison could always be made by those who would furnish samples for sale to bee-keepers and dealers.

It will be understood that any honey of a darker shade than darkest amber goes into the class called dark. The color, as fixed by the classification rules, should, of course, apply equally to comb and extracted honey.

In preparing these samples the honey should, if possible, not be extracted, but dripped or pressed from new combs. *The process of extracting has a tendency to cause granulation.* Whether it is the churning or the exposure of the honey in very small particles to the air that causes granulation, the above statement is a fact which I have proved by the experience of many years. I have samples of liquid honey probably a dozen years old, pressed or dripped from the comb, standing in jelly-tumblers with loose tin covers, which show no sign of granulation yet. As the heating and re-heating of honey is liable to darken the color, this should be avoided, as far as possible, with the samples.

I hope that this subject may receive the earnest attention of the convention, and that we may soon have a set of classification rules that will be satisfactory to everybody.

Independence, Cal., Aug. 14.

[I think you misunderstand Mr. Niver if you think he is an advocate of *nine* different gradings. If there is any thing he tried to impress on your humble servant it was the importance of having a *few* grades, and the folly of trying to have an "extra fancy" and a "double-extra fancy;" and as a bee-keeper seldom markets more than one kind of honey at a time, his dealer or buyer will have only two grades to consider—No. 1 and fancy. But if the bee-keeper sends to market, all in one consignment, white, amber, and buckwheat, he might have nine grades; but this is the utmost possible limit, and is a rather extraordinary condition of things.

It might prove interesting and valuable to have samples showing the difference of colors in extracted honey. But one trouble would be that they would soon candy, and then when they were melted up the shade would be slightly darkened. We might have "colored cards" which, if they could be produced, could be sold as low as a cent apiece, or by the hundred at a much less price. I am not sure but that, if several grades of honey showing the representative shades were sent to a maker of printing-ink, he would be able to duplicate very closely those shades; then all that would have to be done would be to print

cards from those inks showing each variation in color.

It has before been stated that honey that has been extracted, owing to the violent agitation during the process of separation from the comb, is more inclined to granulate than so much drip, "squished," or strained honey; but when we remember that a great many *extracted* honeys will also remain clear and limpid for two years or more, we can hardly rely very much on such form of proof.—ED.]

RAMBLE 173.

Mr. Griggs' Experience with Eggs.

BY RAMBLER.

"Why, how do you do, Mr. Griggs? It's a long time since I saw you. I guess you've moved from San Bernardino County."

"Wall, wall! is that you, Mr. Rambler? It does me good to see you again. Yes, I have moved down here near Pasadena. It must be that you have rambled a mighty lot since I saw you."

"Oh! I have taken a few steps north and south; but where do *you* live now, Mr. Griggs?"

"I live right up here near that schoolhouse. You see that house with a 'gabriel' roof? Got as nice a little place as you ever saw, and a nice apiary of forty colonies of bees. Come right along up and I will show you."

"*You* have an apiary? Well, I declare! and when I lived in San Bernardino County you were so tarnally afraid of bees—why, I have laughed more than forty times at the way you used to scoot for the brush whenever a bee would get within a rod of you. How did it happen that you took the bee-fever?"

"You know my wife My-nervy is very fond of honey, and she was bound to have bees and honey, whether I wanted them or not; but seeing that she'd got her mind set on it I did not seriously object, for My-nervy is an awful good woman; and when we were married I promised to cherish and protect her; and I'll do it, if I have to put a cast-iron fence around her, and to deny that my soul is my own. Wall, My-nervy traded that big speckled Plymouth Rock rooster for a little swarm of bees that my neighbor's boy caught—don't remember that big rooster, hey? Why, you used to quote Shakespeare about his early strains, and tell My-nervy that he had such a dulcimer tone to his crow."

"Why, yes, Mr. Griggs; if you had said the dulcimer rooster I'd surely have remembered it. That was surely a good trade, and that is one reason, I think, why you did not object."

"Yes, I like a good bargain if I do get stung occasionally; but I find it just as you told me—the more I'd get stung the better I'd like it, or, rather, the less the effect would be; can't say, though, as I hanker much after stings yet."

"I see you stick to the poultry yet. I think you must have all varieties here—Plymouth

Rocks, Leghorns, Langshans, etc. It's poultry galore."

"Hey? galore? No, don't believe I have any of that breed. Are they good layers? But then, I think we have enough varieties now; but if I think of it I'll speak to My-nervy about it; let's see—galore."

"I wouldn't spend much time looking for them, Mr. Griggs—hardly worth your time. And now, Mr. Griggs, I notice that your hens have access to the apiary, and seem to scratch quite a little around the hives. I'd like to know if your bees sting the black poultry more than they do the other colors."

"Be George! I never thought of it—never noticed; s'posed a bee never cared for color if it could get a chance to sting; but I'll ask My-nervy; she'll know all about it. My-nervy! hello there! I say, hello, My-nervy!"

"Yes, yes, I'll be there in a minute. Let me put these chicks in the brooder."

"Sakes alive! if this isn't the Rambler! I'm so glad to see you! Hiram and I have wondered and wondered what had become of you, and here you are, all of a sudden! just like you, for all the world. Walk right into the sitting-room and take a chair. Take the rocking-chair, Mr. Rambler. Now just make yourself at home."

"Thank you, Mrs. Griggs. I am quite comfortable—real glad to see you; still in the poultry business, and, strange to say, in the bee business too."

"Ha, ha! I knew you'd say so, seeing as how afraid of bees Hiram used to be. But I know Hiram pretty well. He didn't like hens, and he had a horror for ducks and geese; but now he takes just as much interest in them as I do. We are now selling \$7.00 worth of eggs a week, with now and then a duck and a goose. All of these items help to pay for the place. I knew Hiram would soon get used to the bees. Then you see he sold \$40.00 worth of honey the other day, and that was a great pacifier. Oh! my Hiram is a good man, if he is a little hard to manage sometimes."

"Say, My-nervy, Mr. Rambler wants to know if our white hens sting the black bees an—" "

"For the land's sake, Hi—"

"Wall, now, I guess I *did* get the things mixed. So much poultry and bees and such things. Say, how is it, Mr. Rambler?"

"Why, Mrs. Griggs, I just wanted to know if your bees seem to sting black hens more than they do the white or the lighter-shaded hens."

"No, can't say as they do. It seems to me they take to yellow and to fuzzy chicks more than any thing else. A hen hatched out ten chicks under a hive in the middle of the yard; and when she led her chicks off between and in front of the hives one forenoon, there were just three came through alive, and they acted as though they had the blind staggers. No, I can't say as they like to sting black better than they do yellow; but we don't like to have the hens lay eggs under the hives, do we, Hiram? Ha, ha! Why, Hiram had a drefful time at church on that account."

"Now, I am just curious to know what happened, Mr. Griggs. You didn't take a pocketful of bees to church with you, I hope?"

"No, Mr. Rambler, it was worse than that—worse than that."

"Now, My-nervy, I wish you'd keep still about that matter. You're always telling on me, and getting me into a pickleish feeling."

"You must tell it, Mr. Griggs; it may be a warning to me to keep out of a like pickle."

"Land's sake! I hope so. Wall, if you must have it, the pickle that I got into was this way: One Sunday morning, after I had hitched Billy to the wagon for going to church, and while waiting for My-nervy to see to her chicks, I thought I would look to a hive of bees that I thought would swarm soon. When I was fooling around the hive I saw a hen's nest under one of the hives, with two eggs in

against Judge Grabbe's pew. The judge pays \$15 more than I do for a pew, just because it is on the broad aisle, you know. My-nervy can sit right up against his pew, and get just as much of the gospel as the judge can, and at cheaper rates. The judge's wife is very haughty, and can scarcely notice us poor folks; but this time we seemed to attract her attention, and she seemed in a great fidget. The folks in front and the rear of us acted in the same way. The judge's wife got up and flounced out of the church. My-nervy became red in the face, and whispered to me, 'Hiram, something smells bad; that is what is the matter with them.'

"At the close of her remarks the people all arose to sing Greenland's Icy Mountains. I never like to be the center of so much attraction, and I wished that I was an icy mountain or a coral strand. As I was sweating over the matter the usher for our aisle had a confab with Deacon Sayles, and at its conclusion he came to me, and said, 'Mr. Griggs, something seems to be the matter with your pew. There is a strong odor here.'

"Says I, 'That is what My-nervy says; but I feel just as innocent of it as a spring chicken.'

"I was so awfully embarrassed and warm that I put my hand into my coat pocket for a handkerchief, and, blamed if I didn't run my hand into those eggs that I had put into my pocket and forgotten, and which had been crushed. Now, my My-nervy never throws away an egg as long as it will hold together. Even if she knows it is rotten she will save it and use it for a nest-egg, she is so saving of good eggs, you know. I had pocketed one of those rotten eggs, and that was the cause of all the odor and all the trouble.

When I pulled my hand out of my pocket I contemplated the situation, and felt dismally small. My-nervy wrapped her hemstitched handkerchief around my decorated fingers, and we marched out of the church and went home, and we didn't go again for three months."

"Well, I suppose you laid it all to your wife."

"Not I, Mr. Rambler. I know that is quite a common way to do. There is neighbor Sharp. If he loses a plow-wrench out in a fifty-acre lot he will up and blame his wife for losing the wrench. No, sir; I have sworn to cherish and protect My-nervy; and even if she was to blame I'd take part of the blame and let the public know nothing about it."

"But didn't the minister and the deacons say anything to you about coming back to the church?"

"Yes, they were very anxious; and Deacon Sayles told us not to mind it—that it was an accident, and told us not to backslide for such



it. I picked them up to take them to the house, but some other things needed my attention, where I had to use both hands, and I put the eggs in my coat-tail pocket. Before I had gotten through with the hives, My-nervy was shouting for me, and I just tumbled out of the yard and into the wagon, and never thought about the eggs in my pocket. We jogged along calmly until we had passed Deacon Scott's, when My-nervy, says she, 'Whew! Deacon Scott or some one has killed a skunk, I guess; anyway, there's something that smells strong.' It was just so when we arrived at the village. Something smelled strong there too. 'Yes,' said I, 'My-nervy, you think that every thing should smell as sweet as a camomile-bed. I suppose some of these folks have had onions for breakfast, and that is what you smell.'

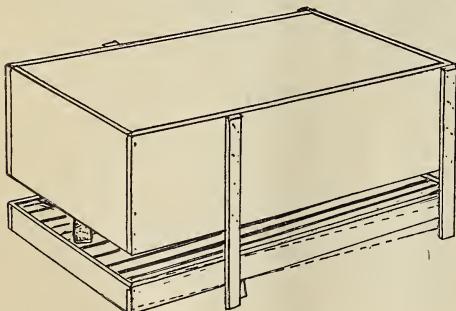
"As I had a cold and a little catarrhal trouble, I could not smell any disagreeable odors. Wall, we were soon in church. Our pew is on one of the side aisles, but it ends up

a little thing as that. But we kept backsliding more and more, until we actually backslid over to the Methodist Church (you know we are Congregationalists). The people were all very kind, and called us brother and sister Griggs, and told me that their doors were wide open, even if I did carry eggs in my pocket. Then one of the sisters told my My-nervy that Judge Grabbe's wife had said she hoped the poultry-raisers would stay away from their church.

"I thought about this matter all the way home, and finally said I to My-nervy, 'If Judge Grabbe's wife thinks that way she is a greater backslider than we are, and it is our duty to return to the pew next to her, and set her an example of charity.' She acted as frigid as Greenland's icy mountains; but after I had taken her a few sections of honey, and apologized for taking rotten eggs to church in my pocket she has been one of our best friends. I shall remember the occurrence to my dying day. It is a disagreeable subject for me to talk about. Now you have heard it I want you to come out to the shop and I will show you my improved bee-feeder."

"I think, Mr. Griggs, that your bee fever must be lasting if you have got to inventing things."

"This is my automatic feeder. This box will hold about ten pounds. Under it is a shallow box having the usual divisions to keep the bees from drowning. You will observe that the support for this shallow box is a little off the center. The outlet from the upper box is in the bottom of the left end, and projects well to the bottom of the shallow box. In the bottom of the latter is a cork that fits the orifice from the upper box. Now fill the large



box; the feed spouts through into the lower box until it is full; then the right end becoming heavier, the cork at the left end is thrown up against the inlet, and the liquid is cut off until the bees empty the lower box; then it fills again, and so it continues until the feed is all used up. It works so nicely that I have a notion to get it patented. My-nervy don't exactly agree with me. She has figured up how many dozen eggs it will take, and it worries her. Now, what do you think about it?"

"I have no doubt you can get a patent upon it, for it is quite an ingenious idea; but for all that I think your wife has a sensible view of the matter. Before you spend much money upon a patent it is well to look over the field

and figure into the probable number that will be sold. In the case of bee-feeders you may have the best that was ever made; but they are limited in their use, and there are so many that are simple in construction that a bee-keeper will not spend much money for an elaborate feeder. Your chance for selling even enough to get your money back would be small. Put your money into poultry or bees, Mr. Griggs; they will pay you better than patents on bee-feeders. But I must be going, Mr. Griggs. I have had a very pleasant visit with you. I wish you success; and whatever you do, remember not to take rotten eggs with you to church. Any thing rotten is out of place in church."



HOW MANY BEES FOR WINTERING.

Question.—You have given in GLEANINGS and the other bee-papers your plan of making nuclei and colonies of bees by shaking bees into the nucleus box. Now, what I wish you to tell us through GLEANINGS is, how many pounds of bees would you put into such a box, giving a queen, and the next day when hiving from the box giving frames of honey, to make a full colony to winter over?

Answer.—It is calculated, I believe, that there are about 5000 bees in a pound, where they are taken from the frames without filling themselves with honey; more than they naturally are when not disturbed. Then it is calculated that 20,000 bees make a good strong colony three weeks before swarming. But at swarming time there may be double this number, or more, so that where we work for comb honey on the non-swarming plan we usually calculate on from 40,000 to 50,000 bees as making a good strong colony for working in sections to the best advantage. But my opinion is that more colonies go into winter quarters, which are called strong, with from 12,000 to 15,000 bees, than there are that contain a larger number. Then I always cause the bees to fill themselves with honey before putting them into the nucleus-box; and from considerable experience, by way of experimenting, I am quite certain that the pound of bees taken from the combs in the way they should be to have 5000 in a pound would weigh fully two pounds when filled with honey the way I cause them to fill themselves. Hence, if we call 12,000 to 15,000 bees the right number for a colony good enough to winter the most successfully, we shall want those in our nucleus-box to weigh from five to six pounds, which is about the number of pounds I take when forming a colony for winter, from several others.

Unless your bees breed late in the fall I would not take more than two pounds from any one colony, for fear I might make them too weak for wintering to the best advantage.

It surely can not be advantageous to make a new colony where the making of such colony injures the successful wintering of two or three others. People become reckless, especially beginners, and think that number of colonies makes success, no matter how weak they are; but from all of my experience in the past, Quinby's advice, given nearly half a century ago, which read, "Keep your colonies strong," was the best advice ever given to beginners in apiculture. So if you can not make a colony, or colonies, this fall without injuring the prospect of those from which you take the bees, *don't make the colonies*. In localities where bees breed during the month of September, and where a queen is given to the made colony when it is made, as is proposed, one-half the bees, or from two and one-half to three pounds, will do fully as well as the five or six pounds would where no brood was reared after the colony was made. Then, again, if the person making such colonies had the time and means to feed moderately during the month of September, three pounds would do well enough; for by thus feeding, brood would be reared during the month of September in almost any part of the United States. Where one has the time, and can afford to buy the sugar, there is nothing in the bee business that gives greater pleasure than building up colonies of bees ready for winter during the fall. After they have been fed from five days to a week, brood-rearing will commence in earnest; and if you do not have all the combs you wish for these colonies, they will draw out foundation in the most beautiful manner for the person who is willing to work along these lines in the right manner. But a half-hearted slipshod person had better not undertake such matters, for he will only make a failure of it.

UNITING IN THE BROOD FORM.

Question.—As you have recommended in the bee-papers uniting bees in the brood-form (I think the latter part of August and first weeks of September), will you please tell us in GLEANINGS how many Langstroth frames of brood would form a colony that would be strong enough for wintering, where left on the summer stand, they to be fed up as soon as all brood has emerged from their cells?

Answer.—Uniting brood, or bees in the brood form, is better done during August, though it can be done as late as Sept. 10 to 15th, if brood enough is put together at the latter date. Early in August, three frames which are quite well filled with brood will do very well for this locality; and further south, or where bees breed up to October, two would do, providing the hives are filled with empty combs or frames filled with foundation. Of course, these combs of brood and bees are to have a queen with them, for the bees which are carried with them will not stay where put unless there is a queen with them, or some other precaution is taken. And, having a queen, she will, of course, go right on laying, so that by October you will have quite a strong colony where two frames are used. But if you are

not too anxious for increase, three frames are better than the two. The latter part of August you should have at least four frames, from half to two-thirds full of brood, and in each case the queen should go on one of the frames, and the adhering bees on all of them. By alternating the frames from different hives no quarreling will result, and the mixing of the bees causes them to mark their location anew; and to a greater extent where the colony is formed just at night, so that but few will return to their old location. If this uniting of brood is to be done as late as the middle of September, then I should want at least six frames having brood in them. I have made many colonies the first week in September by taking five to six frames of brood, taking the same from as many nuclei which I had used during the summer for queen-rearing, and taking the queen from one of the nuclei on the frame of bees from her little colony, setting the whole six in an empty hive placed where I wished a colony to stand, when I gave four full frames of honey, putting said honey all on one side of the hive, so that, during winter, the bees would not eat their way to one end, and starve with two frames of honey on the other side of the hive, and had the colonies thus formed make the very best for honey-gathering the next year. The mixing of bees, and the giving of this honey, caused the queen to lay nicely for about a week, and the bees from these eggs added strength to those from the brood that was in the frames when united. If neither you nor any other person has ever done any such uniting, it is always well to "go slow" till you are perfectly familiar with the workings of the matter, when you can "venture out with confidence."



WHY NECTAR DID NOT SECRETE FROM THE FLOWERS; BUILDING SIDEWALKS IN FLORIDA.

I've been endeavoring all summer to solve the problem why there was no honey secreted in the flowers. There have been all sorts of weather — hot days and nights, cool days and nights, dry weather and wet, yet, all the same, nectar was wanting. I've looked at plots of white clover, white as snow, yet I could not discover one bee humming over the blossoms. Sweet clover, white and yellow, had been luxuriant, yet seldom has a bee been seen working upon either. The reason is an unknown quantity to me.

In a recent drive I noticed one reason why our bee-pasture is less. Formerly the gardeners did not use their ground as they do now. At this season of the year, where their early vegetables and potatoes had been raised it would be waving like waves of the sea with polygonum, Spanish needles, and other fall

flowers that yield nectar. Cornfields, with the improved implements of culture, are also destitute of these plants. Low lands along the river are being leveed and drained; and where the plow and the reaper go, the bees have to take a back seat.

Bees have been very erratic this season. They will swarm, cluster, be hived, and then return to their old home; repeat it again the next day, and finally settle down in their old home.

We may expect a fall flow of honey, judging from the amount of rain that has fallen; but if what the Germans say is true, it will be a failure. They say bees will not work where grasshoppers have been; and they were never more plentiful than now. Great big yellow fellows are eating buds and blossoms, and ears of corn; we only regret that we have not chickens enough to eat them.

One good thing about bee culture—if bees have an off year we can do something else—amuse ourselves in some other line of industry.

Mr. Editor, I like your homely talks. The one in last GLEANINGS about good roads pleased me exceedingly. I've had some experience in building sidewalks in Florida; and the best way is to arise and build, as they did the walls of Jerusalem. I know those who refuse to help in any such improvement are very apt to use it the most. They refuse to aid in buying lumber for a walk; yet when it is finished they trundle heavy wheelbarrows over it, breaking it down.

Peoria, Ill.

MRS. L. HARRISON.

DANZENBAKER VS. NIVER ON THE KIND OF HONEY THAT SELLS; IS THERE MORE HONEY IN 15-CENT SECTIONS THAN IN 10-CENT ONES?

I dissent from the idea set forth on page 570, that three sections like the middle one can be produced for one at the right, with plain sections and fences, with proper management; and I venture that J. E. Crane, M. H. Mendleson, N. D. West, Vernon Burt, and hosts of others will sustain me. If supers are as warm as they should be in a full flow of white honey in June weather, at least half the sections should grade No. 1 when the rest grade No. 2, either of which will bring from 10 to 13 cts. wholesale.

It is rather discouraging to think of retailing even No. 2 sections for 10 cts.; but it may be all that black buckwheat honey is worth; but if it is retailed for 10 cts., there can not be much for the producer's pocket after the supply-dealer, railroad freights, carting, and commissions are paid.

We know that buckwheat yields little or no honey in hot weather. In cool latitudes, where it yields surplus during cool days and chilling nights, it may not be possible with ordinary hives to have the supers warm enough to have combs drawn out, and the honey cured fit to seal at the sides of the sections to grade as No. 1; and the buckwheaters are obliged to make only No. 2 or none, and sell it for 10 cts., as it is all it is worth. But the most of us are happy to know we are not raising comb honey yet to be retailed for 10 cts.

The bulk of the 4×5 plain sections raised by myself, and others that I have seen, will grade No. 1, and we get all the bees make and ought to spare. Our chief concern is to know that they have not put so much in the sections as to be short of winter stores.

F. DANZENBAKER.
Washington, D. C., Aug. 10.

THAT "GOOD CATCH."

O Mr. Editor!—What won't you ask of us next? But why hold them on? They'll stay without if they care to. But I don't see that I nor any other "young lady of prepossessing appearance" could succeed in holding a swarm of bees on a limb if they wished to leave. And should the swarm think the lady intrusive, and try to discountenance her, what assurance is there that the "\$10" with all the "grace that one of her sex has" would enable her to still "have about her an unconscious air of ease," while painfully conscious of the disaster to her "prepossessing appearance"? I've the bees, but I'll not send in my picture.

E. L. MORE.

So. Cal., Aug. 1.

WAXING RUBBER RINGS TO PREVENT HONEY LEAKING; HOW TO WAX THE RINGS.

I am so confident, Dr. Miller, that waxing rubber rings will prevent leakage in your locality or in any other that I will forfeit \$500 to the U. S. B. K. U. if it will not, and will sign a legal agreement to that effect. There is no kink about it, except what I fully explained in the article describing the plan.

From what you say about the wax flaking off, I think perhaps you did not have the wax hot enough. It should be boiling, and the rings just dipped in and instantly withdrawn; then there will not enough wax adhere to them to flake off; in fact, you will have to look close to observe any wax on them. It is true that, in screwing the cover down tight, some wax will be forced out of the pores in the rubber; but enough remains to prevent the least trace of leakage—that is, if the jar seals air-tight in the first place.

Southern Minn.

C. DAVENPORT.

"EXTRA FANCY" A SUPERFLUOUS GRADE.

I have read two or three times lately in GLEANINGS about extra fancy comb honey, and now some commission man has taken it up and gives quotations for it in the last issue. Now, I am afraid this will work to the disadvantage of the producers of comb honey, and the commission men will make an extra profit out of it; for will not that extra fancy bring the price that was formerly obtained for No. 1, and our No. 1 then be looked upon and priced as our No. 2 used to be? Not one bee-keeper in 500, may be, will have a few sections of extra fancy; and while he may get a little more for it I am afraid it will tend to lower the prices all along the line. After a while we may hear of "super extra fancy," or some such name, and I would not object to it if the price would go up with the names; but past

experience points the other way. Excuse me for criticising; but I feel that it is a matter of importance to us all.

The honey crop in this part of Wisconsin is very short. We had very bad, rainy, foggy, and cool weather in basswood time, and white clover did not yield any honey, hardly.

[The following private note we think of enough importance to add to the foregoing, even though the writer requests that it be not published. We leave off postoffice and name for this reason.—ED.]

I wish to add to the above, that I have been led to write as I did by a fact that was brought out in our convention last February. At that time, fancy comb was quoted by a commission firm at 13 cts.; and one of our members who had been down three or four days before was told by the same firm that they sold at 15. It is a matter of fact that we never get from commission men a price higher than quotations. As a rule it is nearly always below. Now we are regularly charged 10 per cent commission; 2 cents make over 15 per cent; and when it comes to giving $\frac{1}{4}$ of our crop just to have it sold, it is enough to overtax the patience of a saint, and bee-keepers are not all saints, whatever commission men may be.

My own experience corroborates the above, for last fall I sold to the same firm some comb honey for which they received 13 cts. by their own acknowledgment, and they complained terribly of the lot, as it was not built out to the wood, etc.; and by their own quotations it would not have brought more than 10 cts. in Chicago.

A GOOD FLOW OF HONEY.

[After receiving the foregoing the following came to hand, and is right in line with what has already been said in the matter of the superfluosity of the "extra-fancy" grade.—ED.]

We are getting a good flow of honey here, and have for four weeks past. I, as well as my neighbors, extract every two weeks from L. hives well filled and sealed. We have, up to date, shipped three cars, and have another almost ready. The quality this season seems to be better than usual. It is not white, but I quote it extra light amber. It is of good flavor and heavy body, gathered from alfalfa.

Guernsey, Cal., July 28. F. E. BROWN.

BEES AND BLACK CHICKENS.

Having read in GLEANINGS about bees and black clothes, I will give my experience with bees and black chickens. While working among the bees I noticed a commotion among the chickens, and found that three little black fellows were completely surrounded by bees, while they paid no attention to the white ones. I caught them and found that they were full of stings. There were stings in the corners of their eyes, which I pulled out, and bathed with witch hazel the parts stung. They acted dumpy for a day or two, but are all right now.

Sharon, Ct., July 24. FRANK C. HARRIS.

THE FAMOUS CATCLAW HONEY OF TEXAS.

I send you a photo of myself wiring the famous catclaw shrub, or bush, in bloom, from which we make our best honey. I send you to-day by express a 12-lb. crate of new honey from this plant. Please sample the same and tell in GLEANINGS how it compares with your best Northern honey. The photo also shows the cactus and mesquite. Both of them yield a fine honey, but not yet in bloom—just budding. These come right on the heels of catclaw, and sometimes almost together, and there is very little difference in the quality of honey.

This crate of 12 sections was made in 24-lb. supers without separators, and just taken as it came. Of course, it may not grade A 1, as to perfectness; but tell us what you think of the flavor and quality of the honey. Only starters were used in sections.

Fairview, Tex., May 6. G. F. DAVIDSON.

[The 12-pound crate of honey came duly to hand, but a portion of the comb was broken; but there was enough of it in perfect condition to show that it was of very fine quality, and would rank with the very best of white honey from the North.

This particular honey, if I remember correctly, had a very delicate, pleasant flavor, somewhat suggestive of the smell of the lilac in early spring, in the North; and if Mr. Davidson or other bee-keepers of the South have very much of this honey it ought to be classed as white honey, and run an even race in price.—ED.]

POISONED BROOD.

I lost one entire brood-chamber or 30 days' work for the queen by the young brood dying with something like paralysis within 24 hours after hatching—a new thing to me; and, being a tenderfoot in Texas, I set out inquiring, and found it new all around. Some said it was poisoned pollen or sour pollen; others, poisoned honey. On close examination I found nine had no pollen. I went to feeding rye flour and oatmeal dampened in sun-extracted honey. They stopped dying, went to capping brood, which they had refused to do before. I have taken some memoranda from observation of the actions of the bees during the death-siege, as it is different from any thing else I ever saw. If you have any desire for information I will give it as best I can. Of course, it differs from every thing here. I claim it was a want of pollen causing paralysis, as there is no poisonous plant here. The bees were full grown, well developed, etc., when hatched.

J. M. McCURDY.

Sabinal, Tex., July 21.
[Notwithstanding what you say, I am strongly inclined to believe that the brood you refer to was poisoned by honey or pollen that would not have affected adult bees.—ED.]

The following question was discussed at the Texas meeting: "Is it advisable to use unmated queens for drone-mothers?"

Hutto, Tex., July 26. H. H. HYDE.

[I don't know, but I should think not.—ED.]



HONEY NOT ADVANCING, AND WHY.

HONEY is beginning to find its way into the markets. Prices are not "bearing up" as we hoped; and the reason is, commission houses and honey-buyers, many of them, are offering little if any better prices than ruled in 1897, when there was a large supply of honey. But one, two, or three houses can't advance unless *all* do. As I pointed out in our last issue, when prices are moving upward on every thing else there should be a corresponding rise on honey; and if our commission men can give us a little substantial support we may look for an improvement in general prices. In the mean time, bee-keepers should send only to reliable firms. It is the irresponsible cheap Johns — inexperienced, unknown concerns — that move off the honey at any price for the sake of making it move quick. It is also the firms who are responsible, but who do not make a specialty of honey, and dislike to handle it any way, and because of that dislike sell the "messy stuff" at any figure, "to get rid of it," that help to "bear down" the market.

THE BIG CONVENTION IN PHILADELPHIA,
SEPT. 5, 6, 7.

THE United States Bee-keepers' Association will hold its convention in Franklin Institute, 15, South Seventh St., between Market and Chestnut Sts. An excellent program has been prepared; and in view of the very low railroad rates guaranteed to the G. A. R., there is no doubt there will be a large attendance. GLEANINGS will be represented by two of the Roots — A. I. and E. R. The latter expect to leave Cleveland on the 4th for Philadelphia, probably taking an afternoon train. We are arranging for W. Z. Hutchinson to meet us at that point so we can travel together to the big convention. As also observed in Pickings, the editor of the *American Bee Journal* and Dr. C. C. Miller will also go, besides hosts of other bee-keepers of national reputation.

One of the important problems to be tackled is the adulteration evil; and there should be a large attendance as well as a large enrollment, for it takes dollars to hire lawyers and fight adulteration. Now that the Association has begun to make the mixers in that great city of Chicago "quake in their boots," it is time to follow up our advantage, and that right speedily. The only bar in the way will be the question of money. It will take only a dollar from each member, and that dollar will secure to that member various privileges besides the protection it affords against the mixers of glucose. It must not be understood that a few members are going to fight all the battles, for they simply can not. Unless bee-keepers generally take hold, very little will be accomplished.

The great generals of the war realized that when, having secured a slight advantage, it

was necessary to follow it up immediately. We have obtained quite an advantage already in a little preliminary fight against the adulterators in Chicago. Let us follow it up in a good substantial manner.

"THAT GOOD CATCH," AND WHO SECURED
THE FIRST PRIZE.

WE received quite a number of photos and one wash-drawing, showing a young lady holding a swarm of bees just as she is about to hive them. After all the entries were closed, Aug. 15, there came another photo from another party, J. O. Sheman, that might have secured the first position; but in fairness to the other contestants the prize had to be awarded to one of the number who sent pictures before the date named. W. Z. Hutchinson has secured the first prize, \$10.00, and his picture, accordingly, will appear in the frontispiece of the A B C book. The second prizes we have as yet hardly decided to whom they shall be given. There are several good ones in the lot, and we shall give to perhaps two or three of them \$5.00, thus placing them all on a level so far as merit is concerned. One and perhaps two of them will be used to adorn the honey-leaflet that we expect to get out, showing the industry from A to Z, and in such form that the average consumer can take in at a glance just how honest honey is produced, and how it is finally landed on the market.

These "good catch" pictures will be shown in GLEANINGS in due course of time, and I think our readers will all agree with me that the daughters of bee-keepers are exceptionally good-looking. I do not know the names of more than one of them, at least, and that one, of course, will not be given.

VICTORY THROUGH DEFEAT; HOW THE ASSOCIATION HAS SCARED THE ADULTERATORS IN CHICAGO.

WHEN the U. S. B. K. A. met at Omaha last, the executive officers of the Association held a conference to determine upon a policy to be pursued with reference to adulteration. The result of the conference was that General Manager Secor was instructed to proceed against the glucose-mixers in such manner and such place as he deemed best. Nothing was said about the matter at the time in the bee-journals, as it seemed wise to keep it quiet till such time as actual suits were begun, arrests made, and convictions or acquittals secured.

As will be seen, the Association commenced operations in that hotbed of adulteration, Chicago; and although we have met with temporary defeat, that defeat seems to be really a victory. Here is what is said in the *American Bee Journal*, an advance proof of which was kindly furnished me by the editor:

It will be news to practically all of our readers when we announce that an attempt was made awhile ago to stop the sale of adulterated honey in this city.

The latter part of last April, upon receipt of instructions from the United States Bee-keepers' Association to go ahead in the honey-adulteration cases, Attorney Herman F. Moore (who was employed by the Association) and the editor of the *American Bee Journal*

proceeded at once to collect samples of suspicious honey for purposes of prosecution. Nine samples were selected from the dozen or more procured, on recommendation of Chemist E. N. Eaton, as being clearly adulterated with glucose.

Out of the nine, five were taken, and a complete chemical analysis made for use in court. Upon the advice of the State's attorney's office, the cases were to be taken before a justice of the peace, and Justice W. T. Hall was selected. Assistant State's Attorney Fred L. Fiske was detailed to assist Mr. Moore in preparing the evidence and conducting the trials, the intention being to try one case at a time, and follow up with the remaining four if successful in the first.

Acting on the suggestions from the State's attorney's office, criminal proceedings were begun July 1 against Nelson N. Blood, 448 W. Lake St., the complaint being made by the editor of the *American Bee Journal*, who, accompanied by Mr. Moore, had purchased the alleged honey from Mr. Blood himself.

July 3 Mr. Blood was arrested, and gave bonds in \$200 for his appearance July 10 for trial.

July 10 the case of the People vs. Blood came up for trial, and testimony was given by the writer, Mr. Moore, and Chemist Eaton, for the people, and by Mr. Blood in his own defense. The latter testified that he did not know it was not honey; that he had bought it from Weber Bros. (wholesale grocers), who had sold it to him for honey; that he did not know any thing about it.

The case was continued for evidence and argument several times. In the meantime Mr. Moore and the writer called on Weber Bros., and subpoenaed Chas. Weber, after questioning him closely. The subpoena ordered him to produce in court the records, books, papers, and bills relating to his last three sales of honey to Mr. Blood previous to June 4, 1899, being the next day after we purchased the jar of so-called honey at Mr. Blood's store. On the further hearing, Mr. Weber testified that he had tasted the stuff, and considered it good honey; that he had purchased it from Randall & Co., a commission firm on South Water Street. All of Mr. Weber's testimony indicated that he was working in the interest of his customer (Mr. Blood), so nothing of value was gained from him that would aid us — except, possibly, that we learned who did the adulterating.

July 20 the arguments were completed, and Justice Hall made his decision, discharging the prisoner. This was indeed discouraging to the prosecution, as we all (including the State's attorney) felt that under the law we had clearly earned a laudable judgment, and according to the facts as presented in the case. How Justice Hall could render such a decision, in view of the evidence and the law, was, and is yet, a great surprise to us.

The turning-point possibly was this: The law says, "No man shall be punished who shows to the court or jury that he could not with *reasonable diligence* have known that he was violating the law." Mr. Blood did not testify that he even *tasted* the stuff he sold for honey. He testified to *nothing else* that showed *diligence*, small or great. He showed *no diligence*. The law requires *reasonable diligence*. But Justice Hall seemed not to take any notice of this feature of the law, though he expressed himself, when invited to taste the stuff bought from Blood for honey, that he had no doubt it was bogus.

Now, while it would appear that the United States Bee keepers' Association met with a rather discouraging defeat in its first attempt to enforce an anti-adulteration law, we are not sure but a good deal was gained for the cause of pure honey in Chicago, after all. Before Justice Hall rendered his final decision it was noticed that the honey adulterators had wisely taken the hint, and there appeared the additional word "Imitation" on the labels of their mixture of a good deal of glucose with a little honey, thus correctly renaming it "Imitation Honey."

Besides the above advantage gained, we think the adulterators will not find such a great demand for their compound hereafter, as the consuming public were made aware of the prevalence of the bogus article through the notices in the newspapers of the attempt to enforce the anti-adulteration law of Illinois.

It seems hard to understand, in view of all the facts presented, how Justice Hall could have discharged the defendant, for it appears that there was no question at all about the honey being adulterated, nor as to whether Mr. Blood sold that honey or not; and to any

bee-keeper, at least, it would seem that the defendant did not in any sense use any "reasonable diligence."

The case made quite a stir in the Chicago papers — so much so that the adulterators of honey have been badly scared, and well they may be. If I am not very much mistaken, the Association will recommend going right ahead. In the next suit, in all probability, conviction will be secured, and the culprit will get a notoriety that will be any thing but pleasant or profitable.

The fact that the adulterators are beginning to mark their packages "Imitation" appears to be a most substantial victory, for the Association has accomplished through its officers something of which it may be proud; for no consumer will knowingly buy such vile stuff, labeled or marked "Imitation."

The Association can not afford to stop at this stage of the game, and it will not, I verily believe. If one little prosecution like this, resulting in apparent defeat, has accomplished such good results as this I believe bee-keepers will rise up in their might and fairly pour their dollars into the Association treasury for the express purpose of giving the adulterators a few more rounds.

That the wholesale firm which furnished Mr. Blood with the stuff has already taken a wholesome warning, is evidenced by a letter which they wrote to their salesmen, and which Editor York was able to secure. Here it is:

Chicago, July 10, 1899.

PURE FOODS.—We believe the tendency of the buying public in the future will be in the direction of strictly pure foods — and in our opinion the result of this will undoubtedly prove highly beneficial to the health of the consuming public, and unquestionably more satisfactory to the jobber, retailer, and everybody concerned in selling this quality of goods. Adulterated articles in the food line are still on the market, . . . but we believe it will be to the best interests of all concerned to advocate the purchase of pure foods as speedily as possible. Unless you know it to be a positive fact that the article you are selling is absolutely pure, do not sell it as such. If you are in doubt, make it known that way. WEBER BROS.

If this is not good anti-adulteration doctrine, I do not know what is. The presumption is that a number of other firms will come to the same conclusion — especially so after one or two *more* cases have begun, which there undoubtedly will be.

Hurrah for the Association! Give it your support with your dollars.

BEES, BIRDS, AND GRAPES.

NEARLY every year about this time the bee-keepers are met with complaints from their neighbors about how the bees are eating up their grapes. It has been pretty well established that bees never touch the sound fruit; and until within a year or so it was supposed by all fruit-growers, and even by some bee-keepers, that bees made a small round puncture through the skin of some soft grapes like the Niagara, and even pierced the more hardy Concord. But two years ago we were successful in finding the real culprit, and that was in the form of a little bird, quick of flight, scarcely if ever to be seen around the vines when any human being was present. This

bird, about the size of a sparrow, striped, and called the Cape May warbler (*Dendroica tigrina*), has a long sharp needle-like beak. It will alight on a bunch, and about as fast as one can count the grapes will puncture berry after berry. After his birdship has done his mischief he leaves, and then come on innocent bees to finish the work of destruction by sucking the juices of the pulp of the berry, finally leaving it dry and withered up. While the birds are scarcely ever "caught in the act," the bees, ever present during all the hours of daylight, receive all the credit for the mischief.

Grapes broken in handling will be visited by bees independently of any tampering on the part of the feathered tribe; and at such times bees do very often prove to be quite a nuisance; but it may be said, on the other hand, that broken grapes are unsalable anyhow, and therefore this damage is slight if any, and the real mischief or harm done is simply the annoyance caused by the fear of being stung while handling over the bunches in the basket. For particulars in regard to this grape-puncturing bird and its habits, see pages 790, 827, for 1896, and page 22 for 1897.

ROBBING BEE-KEEPERS.

In our issue for July 1 appeared the following advertisement:

WANTED.—To introduce my golden Italian and Carniolan queens into your apiaries. Price, tested, 50 cts.; untested, 35 cts. Satisfaction guaranteed.

F. T. LUPTOM, Warners, N. Y.

This advertisement was received in my absence or it would not have been accepted, on account of the exceedingly low price, and also because of "golden Italians," "Carniolans," etc. Our people here noticed the low price, but sent at once for samples of his queens, and, of course, the samples were very satisfactory, and the man wrote as if he were honest and straight. He wrote about having queens killed by leaving the cages outdoors right in the hot sun, and asked questions as if he were a beginner.

Not very long after the advertisement appeared we began to receive complaints, and our good friend Paltridge sent us a communication which he had received from the postmaster at Warners, which reads as follows:

Stephen Paltridge, Ardonia, N. Y.

Dear Sir:—F. T. Luptom does not live here. He comes about twice a month and gets his money on money orders. His letters are forwarded to Syracuse, N. Y.

DUANE LA DU, Postmaster.

Warners, N. Y., Aug. 9.

On receipt of this last I knew at once we were swindled, and wrote to the postmaster, requesting to have all mail for Luptom stopped as quickly as possible. I also wrote to the manager of our branch house at Syracuse, Mr. F. A. Salisbury, in regard to the matter, and it is largely due to his untiring energy and push in the matter that Luptom was not only pretty soon hunted up but landed in the lockup. We have thought best to submit to our readers the following, clipped from a Syracuse paper:

Postoffice Inspector Kyle was notified, and went to work on the case. He learned from the postmaster at Warners, that on July 15 a young man about 22 years old had money orders cashed there to the amount of

a little over \$15, and secured two registered letters containing 50 cents each. He gave his name as Luptom, and left orders to have all future mail forwarded to Syracuse. At this postoffice he ordered his mail sent to Locke, Cayuga County.

Last Thursday Inspector Kyle went to Locke and found that mail to the amount of seventy letters was waiting for Luptom, and had not been called for. From advices received it was learned that they contain money orders to the amount of \$16 or \$18. Payment on these has been stopped, and under the ruling of the postoffice they will be returned to the offices from which they are sent, and repaid to the remitters.

There being no calls for Luptom's mail at Locke, it was difficult to locate him. The most interesting part of the story is the manner in which he was caught.

Yesterday afternoon F. A. Salisbury, who keeps bee supplies at No. 185 West Genesee St., went to Inspector Kyle's office in the Postoffice Building and said that he was the agent for GLEANINGS, and wanted to know if something could not be done to head off Luptom. He said that that afternoon a young man with a smooth face had walked into his store and asked him if he knew any thing about this Luptom who advertised queen-bees so cheap. He said his father had sent him some orders, and never heard from the money.

Mr. Kyle questioned Mr. Salisbury closely as to the man's appearance, and found that it tallied exactly with that given to him by the Postmaster at Warners and by Adam Metzger, general delivery clerk of this city. The fellow had told Salisbury his name, and that he worked for Charles Mills, of Fairmount.

Mr. Kyle, accompanied by United States Deputy Marshal Spaulding and Adam Metzger, drove out to the Mills farm and found the young man sitting outside stemmin' elderberries at 5:30 o'clock. Kyle immediately accused him of the crime, and the lad turned pale and made a complete confession.

The young man was arrested, and brought to this city.

We are fortunate this time that no great amount of money was invested or required. There is a great moral to it, however. It ought to impress every young man — yes, and old man too, for that matter — that to succeed in the swindling business requires a great amount of very hard work; in fact, one can go to work at almost any thing and make more money honestly than he can get, even if he succeeds in his dishonesty; and, besides, the way things are managed nowadays, no matter how ingeniously the guilty one lays his plots, he is pretty sure to be caught in a very little time.

Later:—To-day, August 28, we have just received a letter from the young man who called himself Luptom (admitting that Luptom is not his name), begging piteously not to have his real name appear in GLEANINGS, and promising to send queens to all who have lost their money, from some reliable breeder. There is just one thing in his letter that does not sound honest. He says: "I am the victim of foul play." Now, the man who takes an assumed name, and has his mail sent around to different offices, as in the above newspaper statement, is, I should say, the "victim" of his own rascality, instead of foul play on the part of some one else. I have written him that, if he will return all money that he has secured by his swindling scheme, we will keep his real name out of print. Unless he does this we shall show him up as he deserves. If he does not make good those who have lost by sending him money in response to an advertisement in GLEANINGS we will try to make it good ourselves. He requests us to send him a list of those who have sent him money and received nothing.

A. I. R.



Let us make man in our image, in our likeness.—
GEN. 1:26.

In the Declaration of Independence of the United States there is a clause that has often impressed me. It says, "All men are endowed by their Creator with certain unalienable rights : among these are life, liberty, and the pursuit of happiness." The great Father certainly had in view that man should take a very high position in the universe. He planned that he should not only do a great work of some sort, but I think he also intended that he should enjoy himself and be happy ; and the framers of the Declaration also seem to have had a very high conception as to what mankind should be, or, if you choose, as to what the people of the United States should be. Not only are they to do a great and good work, but it is to be their privilege to seek happiness—to have "fun," as the boys would express it, and enjoy themselves. There are some of us whose lives are so busy that we hardly dare think of stopping to play and have fun. There are certain overworked women—may God help them when their eyes scan these pages—yes, may God help them to find just a *little* time once or twice in a year, if not oftener, to take a holiday, and possibly to go on a picnic excursion. It is right, and I am sure God intended we should have some play, every one of us, even the gray-haired men and women as well as the juveniles and the boys and the girls. A great many times I feel as if I had no sort of business to take a holiday at all, nor even to stop and have fun, as there are so many things that ought to be doing, and others that ought to be *done* every day in the year.

I have just been making some rather severe criticisms on Sunday excursions, and some of you may have received the idea that I am down on excursions of *all* sorts. God forbid! I well remember the time when the talk of a Sunday-school picnic almost set me wild. Yes, I can remember, too, when the thought of the Fourth of July prompted me to swing my ragged straw hat, and almost make myself hoarse shouting "Hurrah, boys!" And I have not got over it yet ; in fact, I sometimes think that, after one gets to be about sixty years old, he should be a boy *again*, for at least a considerable part of the time. Yes, I believe in *excursions*. Of course, there may be too many of them, and I have sometimes thought our people were just now having *more* excursions than they really need. They cost quite a little money ; and if we do *not* have them on Sunday there is a loss of time that every one can not well afford. I have recently attended two excursions. A year ago the employees of our factory and the business men of Medina united in having an excursion together ; but somehow or other Satan got his finger into the picnic, or rather, perhaps, before and after the picnic, and there was some unpleasantness ;

so this year they decided to have two picnics, with only a short interval between them. One of them was at a place where I should not have chosen to go ; but a great many times in these lives of ours I think it wiser to join in with the crowd, and go along with the crowd, than to hurt people's feelings by making a fuss about things that are not *exactly* as one would have them. You know what I mean, friends ; and I wish you to please keep in mind what I mean, in what I am going to say about this excursion to a modern fashionable picnic-ground. One of the finest attractions the place afforded was a beautiful bathing-ground on the shores of Lake Erie. The locality was all clean white sand—so clean you could sit down anywhere with your Sunday clothes on, and the children could roll and tumble in the soft warm sand without soiling their clean clothes a particle. Then they could roll and tumble in the water warmed by the August sun, to their hearts' content ; and, in fact, a great part of them did roll and tumble in the beautiful clean water pretty much all day. In fact, whole families—father and mother, and all the boys and girls and juveniles, with proper bathing-suits, were thoroughly washed, and washed *clean* for at least *once* in their lives if not more.

I soon discovered that this same clean white sand, right at the water's edge, was an ideal place for running a wheel. My wheel was with me, and I rode along the beach until I was tired, and then had a delicious nap in a heap of soft warm sand, my head pillow'd on my wheel. Then I got up and wheeled again, and I went so far away that I could neither hear the shouting of the bathers nor see their forms in the distance. If I went too far away from the water's edge the sand was too soft, and my wheel would slip; while if I went too close, the white caps would break over me and make the wheel spatter my clothing. But the water was so clean and pure it left no trace. Oh how I *did* enjoy that wheelride, with the strong breeze right from off across the water giving me strength and inspiration ! As I was away off alone I could utter praises out loud, and give vent to the exuberance of my spirits. I said, "O Lord, I thank thee that thou hast given me a human life to live." In repeating this afterward to my relatives who were with me on the trip, one of them remarked, "But, brother, are there not *other* times when you feel as if life with its many cares costs almost as much as it is worth?"

"Yes, dear sister, I am often tempted to let such thoughts come into my mind, but I always make haste to say, 'Get thee behind me, Satan,' for I am sure these thoughts come from him. It is one of his weapons."

A nephew whom I have spoken of asked me if I had seen the sights. I told him I had seen most of them. Then he inquired if I had been in the great pavilion. I told him I had been through the most of it, and admired it, but I said there was a certain part of it I did not feel inclined to visit.

"O Uncle Amos ! you *must* visit that part of it. You certainly should know of these things you talk about. Now, I just want you

to go through that whole place, and see what is going on, and see how it is managed—not particularly that you may find fault with it, but that you may be able to speak understandingly about these things connected with so many of our pleasure-resorts. You certainly should know exactly what you are talking about and discussing."

Now, may God help me to be fair and honest, and not let even my prejudices against the liquor-traffic lead me to exaggerate. The pavilion was a beautiful large building with porches and verandas, and seats for hundreds of people—may be thousands. There were fountains, and beds of flowers, and foliage plants, around it. There was plenty of nice drinking water for all who preferred to drink it. Then there was lemonade, ice-cream soda, and other things of that sort. In connection there was a dining-room and a lunch-room, with a bill of fare that was exceedingly reasonable for such a picnic-ground.

At first I did not quite understand the very reasonable prices. Well, back of the dining-room there was an elaborate array of modern arrangements for furnishing lager beer, and, I suppose, any other kind of beer in any quantity the crowd might demand. Once more may God help me to be truthful and careful. Every thing was clean and orderly. The men and women who were drinking were well dressed and respectable-looking; and one would be almost tempted to think the thing was not so bad after all, where it is carried on under proper restrictions. They were doing a very large business when I happened to drop in. The scene was painful to me; but remeniscing my promise to my young relative I pushed on. It became more and more painful as I proceeded. I thought of the work of the Anti-saloon League, and of the prominent position I have occupied in it ever since it was started. I wondered if it was my duty to encourage such a place by my presence and by walking through it quietly, just as I was doing. More than once I turned and retreated; then I walked in again. Pretty soon I began to see familiar faces. The thought then occurred to me that some of our Medina people would say I was just going through there to spy out which one of my friends and neighbors drank lager beer in an open saloon. I felt guilty and troubled, and I went away.

I do not think there were *many* of our townspeople who visited this part of the excursion-grounds. I did not see anybody showing any signs of intoxication around there. The management was so perfect, very likely nothing of the kind would be tolerated. I did not see any intoxication *anywhere* on the grounds. I did not see any rudeness. I do not know that I heard anybody speak a profane word.

I noticed in the program, just before starting, that all the entertainments during the day were to be free of charge, and this feature commended itself to me. There are many places nowadays where they advertise great attractions; but when you get there it takes quite a pile of money to get through it all.

A year ago, in company with a niece in her teens, we took a wheelride over to Akron. As it was at the time of the street fair (and this, you know, is advertised as being entirely free to everybody) we thought we would look it over. First we found we must pay a nickel apiece to get into the inclosure; but a nickel is so small nobody makes a fuss about it. Then we had to pay a nickel apiece more to store our wheels; then ten cents each to see the trick rider on a velocipede. Of course, we would be interested in that. Then the menagerie was 15 cents apiece; and, finally, to get out of the street fair we had to pass through a "midway." Now, some of the midway shows cost 25 cents apiece; but we did not go into any of them; and before we went out my young friend said, "O Uncle Amos! let's get out of this horrid place. I do not see what *anybody* wants to be here for." Well, I felt just about as "Rene" did. We were soon out in the free air of the country, speeding along where every thing was pure and honest and good. You see the managers had planned this thing so that everybody was *obliged* to pass through the filth of midway in order to get out of the trap they found themselves in. Oh dear me! I did not intend to write up street fairs just now; but since I have gone and done it I think I will let it remain. Let us now go back to the great pavilion on that beautiful pleasure-ground.

I told you the entertainments were to be all free. I supposed, when I read the program, that the dollar ticket purchased before starting included admission to all the entertainments. About two o'clock in the afternoon I saw people crowding into the audience-room of the pavilion. By getting on a chair and afterward stepping up higher on to a table I was enabled to see over the heads of the great crowd; and I saw something I enjoyed so much I shall take pleasure in telling you about it. A gymnast was performing upon a trapeze. He made his bow to the audience. I soon found he was not only a gymnast but a humorist, and an expert in both lines. When he made his bow to the audience there was something mechanical and awkward in his manner. When he sprang up into the air and grasped the bar above his head he seemed to be still awkward; and when he climbed, with considerable exertion, so as to sit astride the bar, he still gave one the impression that he was a green hand at the business. Finally he stood up on the bar. I noticed this bar seemed to be a stout brass rod, or perhaps a steel rod covered with brass. He had on light low-down slippers; and while I was noticing how loosely his slippers rested on this brass rod he seemed to lose his balance, swing his arms in a sort of helpless way, apparently, and finally tipped over backward; but just when everybody expected to see him crack his head on the hard board floor, by some unknown power his loose slippers seemed glued to that brass rod, and his feet glued to the slippers. His head went straight down, and in some wonderful way his body swung clear around, and came right up on top of the

bar. Then he tipped over forward, went clear around and came up again, and pretty soon he was flying around the bar like a windmill, evidently trying to stop, but could not; but when he came up on top of the bar his feet were just as loose as when he first stepped on it. Now, some ingenious piece of mechanism must have been invented to enable him to do this sleight-of-hand, or, if you choose, sleight-of-foot, performance.

I figured up that, to perform such a trick, one would need a stout harness going over his shoulders and down under his feet; and this harness must be so it could be securely attached to the trapeze-bar and yet so it could take hold or let go of it in a second of time. After he jumped down from the bar the shock of alighting seemed to have dislocated his knees and thighs; then he looked down in a quaint way at his deformity, and then at the audience, and then wabbled about the stage as if he were crippled. By some apparent awkwardness he struck his head against one of the pillars on the stage; but his look of blank astonishment to think that the pillar should stand right there when he did not suspect it was so comical and ridiculous that I nearly fell off the table where I was standing, because I was so convulsed with laughter.

Now, this was a very pretty and innocent exhibition. I would not mind paying 25 cents to see exhibitions of gymnastic feats like this. I mean, of course, where human life is not endangered, and where there is no suggestion of any thing bad or wrong. Why, I should be *delighted* to have my three grandchildren see such a performance. In this case there was wonderful skill and agility coupled with a vein of fun and humor that I enjoyed hugely. It interested me to know that God has so made the human frame that it can endure such contortions and such a tremendous strain, and yet be unharmed. How wonderfully the organs of life must be fabricated to stand all sorts of positions and yet every function go on with its work unhindered!

After the trapeze, a very pretty, modest, decently dressed young woman came on the stage. There was a little play with a companion, and some conversation that I could not hear, as I was so far away from the stage. Her companion left, and she stood on the stage alone. I presume my readers will excuse me for describing in print what a thousand or more people saw in broad daylight. Well, this modest-looking and well-behaved young woman deliberately stepped forward and grasped her skirts and threw them over her head, or pretty nearly so. Then she threw one of her feet a good deal higher than her head, and gave an exhibition of what I should call a gymnastic dance that might have been pretty if it had been done by a man instead of a woman. Somebody suggested that it *was* a man; but I am sure it was a woman. By the way the audience applauded I was obliged to conclude that this was nothing unusual. The higher she kicked her feet the louder was the applause; and when she turned a handspring with both feet in the air, and her clothing covering her head and arms

entirely, there was louder applause for some time. There was no laugh on my face, I assure you, when this performance began; in fact, I was a great way from it when I climbed down off from my table and got out into the open air. My face was flushed with indignation. I was ready to denounce the place and the people; and could my bicycle have gone across the water I do not know but I would have shaken the dust from my feet (or rather, perhaps, the white sand out of my shoes) and started for home then and there. Of late years I do not talk out what I feel on the impulse of the moment as much as I used to do. I walked out among the trees and thought the matter over. If I went home before I found my friends and relatives they would wonder, and think singular of it. When I found them I had cooled off somewhat; but I had not changed my views very much, after all. Many of you have read the book that suggested the thought, "What would Jesus do?" I sat down and thought it over. Did Jesus want me to be in such a place? Was my nephew right when he said I ought to know about such places? Well, perhaps I should; but just now I humbly confess that I do not exactly know what is right and what is best in matters of this kind. Thousands of my good friends will say, unhesitatingly, that I had no business in such a place, and that it was my plain duty to get out of it just as soon as possible. They might urge that, by my presence, I gave encouragement for others to go to that or similar places. Then there are other thousands who say that I would harm the cause dear to my heart more by holding myself entirely aloof from pleasure resorts, and yet writing about these things when I know almost *nothing* about them. These friends might say, and perhaps do say, "Brother Root, you have come down hard and severe on Sunday excursions. Now, when people all respect the Sabbath, as you would have them do, and plan their excursions on week days, are you going to come down on *these* things too, and leave the boys and girls to think that you are one of those old gray-headed deacons who do not see any fun in the world anywhere, and think everybody should hoe corn, even on the Fourth of July?"

Dear friends, I have studied this ground all over, and I am praying that God may give me wisdom and guidance; and I feel just now like asking you in a like manner to pray that my advice may be good in this matter of holidays, excursions, pleasure-resorts, and recreations. You may remember the dear Savior once said in that wonderful prayer, "I pray not that thou shouldst take them out of the world, but that thou shouldst keep them from the evil." And, again, we know he once attended a wedding, and not only encouraged it by his presence, but actually furnished refreshment by that notable first miracle. We have reason to think that he went out among men, especially where he was invited. He did not shun crowds, and he frequently went among the rich; attended great feasts, and was one among the people.

I said I witnessed no intoxication while at

the pleasure-resort. Two fine large steamers carry the people to and from the places, running every thirty minutes. When I first got aboard, in finding a place to store my wheel out of the way I ran across a lager-beer saloon, and it was any thing but a pleasant place to the sight, smell, or ears. I think a band is employed on the boat. The members of it have a sort of uniform. On my return, by accident I got close to the saloon again. I did not go there purposely, friends, to find out what I could see. Men and boys were crowding into the saloon. They had been drinking more or less all day, and quite a good many were well along toward intoxication. I had to pass the saloon with my wheel when I came to the landing, and almost got into the middle of a fight. The fight was between two or more members of the band. The beer was the cause of it. Others interfered, and begged of them not to make a row on the boat. The flushed face and bloodshot eyes of one of the men indicated that he had scarcely sense enough left to dimly realize that a fight was *not* just the thing close to the gang-plank, where excursionists were crowding to get off. The point I wished to make was this: Even the drinking people who, while in that great pavilion during the day behaved themselves all right, may not have behaved themselves after they got home at night. What stories might be told if we knew just what the results are after attending an excursion where beer is sold all day long to all who may call for it! There are a good many resorts, I know, where no intoxicants are sold; but I believe they are mostly those that are not kept open on Sunday. It seems to me that good people ought to endeavor to patronize the temperance places. Still, it may be well for good people to know just about how things are managed in these other places where beer is sold and good order is preserved. I have been told, since coming home, that the performance that I have described is what is called the "skirt dance;" and although nobody has told me, something suggests to me just now that the great pavilion, with its low-priced refreshments, fine music, and free entertainment of all kinds, is nothing more nor less than a well-conducted beer-garden on a large scale. These skilled performers, these beautiful grounds and expensive buildings, were built and all the expenses paid by the profit that comes from their tremendous trade in beer. If somebody had informed me that I was invited to attend a performance at a beer garden near the city of Sandusky, I would have refused outright to go, and very likely the same is true of thousands of other people who go there. With a hope and a prayer that what I have written gives a fair and honest report of the existing state of affairs at one of our great pleasure-resorts, I close. May God help us in battling for the right. May he give us wisdom to recognize humanity as it averages the world over; and may we have grace from on high to enable us to avoid going to either extreme. We are *in* the world; we are *of* the world; and may we think again of that wonderful prayer, "I pray

not that thou shouldst take them out of the world, but that thou shouldst keep them from the evil."

TOBACCO AND THE PRESIDENT OF THE UNITED STATES.

The following was sent us by one of our subscribers, in a letter. I can not tell from what paper it was clipped, but it is credited originally to the *Chicago Register*:

It is said that, with the possible exception of Grant, the present occupant of the White House, Wm. McKinley, is the most inveterate smoker ever elected to the presidency. So many cigars has the President cremated in times gone by that recently his nerves began to break down. He has smoked during all his working hours for years, and until a short time ago experienced little ill effect. He has now, however, found out that he must abandon or lessen the habit, or it will cut his career short.

The discovery that he was soaked with nicotine, and was likely to become a wreck, according to a Washington dispatch, caused McKinley to seek the hot springs of Virginia, to take the course of baths prescribed by his physicians to steam out of his system the poisons instilled through the excessive use of tobacco. The temperature of the water at these springs varies, but seldom falls below 104 degrees. A course of baths requires about ten days, one bath each day. In this time, if Mr. McKinley can control his appetite, the poison will be boiled out of his system.

Now, very likely the above is an exaggeration — at least I hope it is, and I shall be exceedingly glad if somebody who knows the facts in the case will tell us how much is truth and how much is error.

Let me say just a word in defense of our President while we are on this subject. His pastor has just written a little note that was published recently in the *Christian Herald*, to the effect that our President still holds to the habit of his life, Bible-reading and prayer, before he goes to bed; and that, even when he has been kept up by important duties until a very late hour, he still holds on to his Bible-reading before retiring. May God be praised that we have a God-fearing President to at least *this* extent!

HUMBUG WEATHER PROPHETS.

May be some of the friends think I am devoting considerable space to this matter; but it seems as if, as with Electropoise and Oxydonor, our people need considerable exhortation and shaking up on the subject, especially when so many people, who ought to know better, accept as *science* such silly nonsense. The Department of Agriculture at Washington has just sent out an exceedingly valuable bulletin, entitled "Weather Forecasting." From page 15 I extract the following, which are the words of our able and efficient Chief of the Weather Bureau, Willis L. Moore:

At the present time I know of no scientific man who essays to make long-range weather predictions, and I would especially caution the public against the imposture of charlatans and astrologists, who simply prey upon the credulity of the people. As storms of more or less intensity pass over large portions of our country every few days during the greater part of the year, and as it is seldom that the weather report does not show one or more storms as operating somewhere within our broad domain, it is easy to forecast thunderstorms about a certain time in July, or a cold wave and snow about a certain period in January, and stand a fair chance to become accidentally famous as

a prophet. You may select any three equidistant dates in January, and forecast high wind, snow, and cold for New York city, and stand a fair chance of having the fraudulent forecast verified in two out of three cases, provided that you claim a storm coming the day before or after one of your dates to be the storm which you expected.

I believe it is impossible for any one to-day to make a forecast, based fairly upon any principles of physics or upon any empirical rule in meteorology, for a greater period than one or two days in winter or more than two or three days in summer; and there are times in winter when the movements of air conditions are so rapid that it is extremely difficult to forecast even for the space of one day. The Weather Bureau takes the public into its confidence in this matter, and does not claim to be able to do more than it is possible to accomplish.

METHOD IN MADNESS; A BEE-KEEPER IN A LUNATIC ASYLUM.

GLEANINGS not only goes to all sorts of people, but it has frequently made its visits to, and been highly prized at, evidently, one or more lunatic asylums. From a pathetic letter from one of these unfortunate brothers I have taken the liberty of copying the following :

Mr. Root:—I have no honey-bees here. You never sent me any of your journals to the hospital here since I was at this house. I had one when I was down at the other house, but some scamp stole it. They do not like bees here. I use no tobacco at all. I do not even smoke. I have not since my name was used for President.

Harrisburg, Pa., July 19.

G. B.

We will gladly send our poor brother copies of GLEANINGS as long as he is able to read them; and if some other unfortunate steals them, all the better. We do not believe in stealing, as a rule; but when somebody steals your copy of GLEANINGS, just write a postal to your friend A. I. R., and he will replace it free of charge. The above is pathetic in many of its sentences. Our poor friend, it seems, remembers the Tobacco Column, and even through his poor benighted mind he seems to recognize that the President of the United States certainly *ought* to be a clean man in every sense of the word, and therefore he has given up his tobacco. Would it not be well for some who stand high in office to follow the example, in at least one respect, of the poor bee-keeper who has by misfortune landed in an asylum?

CRIMSON CLOVER.

The Department of Agriculture, Washington, has sent out a new bulletin in regard to this clover, from which I make an extract as follows:

The use of crimson clover (*Trifolium incarnatum*) has increased to such an extent that it is now a standard crop in many parts of the Southern and Middle States. It is distinguished by its long head of brilliant scarlet blossoms and by the great depth to which its roots make their way. Wherever the winters are not too severe it thrives and is a valuable plant for sowing or for hay. It is a winter annual, the seed being sown any time from the middle of July to late fall in the Southern States. It grows throughout the milder weather in winter, and quickly makes a dense cover to the ground in the spring. This can be pastured, cut for hay, or turned under for green manure, or all three, depending upon conditions.

The seed of crimson clover is larger than that of red or mammoth clover, and is almost perfectly oval in shape. The fresh seed is of a bright reddish-yellow color, and has a high polish. As the seed becomes older the color changes to a reddish brown, and

eventually the polish is lost, and the seed has a dull, dark reddish-brown color. Such seed should never be purchased, as it is too old to grow well.

In general the seed of crimson clover is less liable to contain many weed seeds than the seed of other clovers. It is harvested before most of the weeds have matured their seed, and being planted in late summer or fall it tends to choke out what weeds may come up with the young plants.

Books for Bee-keepers and Others.

Any of these books on which postage is not given will be forwarded by mail, postpaid on receipt of price.

In buying books, as every thing else, we are liable to disappointment if we make a purchase without seeing the article. Admitting that the book-seller could read all the books he offers, as he has them for sale, it were hardly to be expected he would be the one to mention all the faults, as well as good things about a book. We very much desire that those who favor us with their patronage shall not be disappointed and therefore we are going to try to prevent it by mentioning all the faults, so far as we can, that the purchaser may know what he is getting. In the following list, books that we approve we have marked with a *; those we especially approve, **; those that are not up to times, †; books that contain but little matter for the price, large type, and much space between the lines, ‡; foreign, §. The bee-books are all good.

As many of the bee-books are sent with other goods by freight or express, incurring no postage, we give prices separately. You will notice that you can judge of the size of the books very well by the amount required for postage on each.

BIBLES, HYMN-BOOKS, AND OTHER GOOD BOOKS.

Postage.] [Price without postage.

8 Bible, good print, neatly bound	20
20 Bunyan's Pilgrim's Progress**	50
20 Illustrated Pilgrim's Progress**	75

This is a large book of 425 pages, and 175 illustrations, and would usually be called a \$2.00 book. A splendid book to present to children. Sold in gilt edge for 25 cents more.

6 First Steps for Little Feet	50
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By the author of the Story of the Bible. A better book for young children can not be found in the whole round of literature, and at the same time there can hardly be found a more attractive book. Beautifully bound and fully illustrated.

3 John Ploughman's Talks and Pictures, by Rev. C. H. Spurgeon*	10
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3 New Testament, new version, paper covers	10
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5 Robinson Crusoe, paper cover	10
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15 Story of the Bible**	1.00
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A large book of 700 pages, and 274 illustrations. Will be read by almost every child.

1 "The Life of Trust," by Geo. Muller*	1.25
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5 Tobacco Manual**	45
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This is a nice book that will be sure to be read, if left around where the boys get hold of it, and any boy who reads it will be pretty safe from the tobacco habit.

BOOKS ESPECIALLY FOR BEE-KEEPERS.

15 A B C of Bee Culture, cloth	1.10
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Advanced Bee Culture, by W. Z. Hutchinson ..	50
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3 Amateur Bee-keeper, by J. W. Rouse	22
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14 Bees and Bee-keeping, by Frank Cheshire, England, Vol. I, §	2.36
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21 Same, Vol. II, §	2.79
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Same, Vols. I. and II., postpaid	5.25
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10 Bees and Honey, by T. G. Newman	90
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10 Cook's New Manual, cloth	1.15
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5 Doolittle on Queen-rearing	95
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2 Dzierzon Theory	10
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3 Foul Brood; Its Natural History and Rational Treatment	22
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1 Honey as Food and Medicine	05
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15 Langstroth Revised, by Chas. Dadant & Son	1.10
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15 Quinby's New Bee-keeping	1.40
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15 Thirty Years Among the Bees, by H. Alley	50
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5 Bee-keeping for Profit, by Dr. G. L. Tinker	25
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5 The Honey-bee, by Thos. William Cowan	95
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5 British Bee-keeper's Guide-book, by Thomas William Cowan, England §	40
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3 | Merrybanks and His Neighbor, by A. I. Root... 15
 4 | Winter Problem in Bee-keeping, by Pierce..... 46
 Bienenzucht und Honiggewinnung..... 50
 Or "Bee Culture and the Securing of Honey," a German bee-book by J. F. Eggers, of Grand Island, Neb.
 Postage free.

MISCELLANEOUS HAND-BOOKS.

5 | An Egg farm, Stoddard** 40
 5 | A B C of Carp Culture, by Geo. Finley..... 25
 5 | A B C of Strawberry Culture,** by T. B. Terry.... 35
 Probably the leading book of the world on strawberries.

3 | A B C of Potato Culture, Terry**..... 35
 This is T. B. Terry's first and most masterly work.

Barn Plans and Out-buildings*..... 1 50

Canary birds, paper 50

2 | Celery for Profit, by T. Greiner** 25

The first really full and complete book on celery culture, at a moderate price, that we have had. It is full of pictures, and the whole thing is made so plain that a schoolboy ought to be able to grow paying crops at once without any assistance except from the book.

15 | Draining for Profit and Health, Warring..... 1 35
 10 | Fuller's Grape Culturist**..... 1 15

8 | Domestic Economy, by I. H. Mayer, M. D.* ... 30
 This book ought to save at least the money it costs, each year, in every household. It was written by a doctor, and one who has made the matter of domestic economy a life study. The regular price of the book is \$1.00, but by taking a large lot of them we are enabled to make the price only 30 cents.

10 | Farming for Boys*..... 1 15

This is one of Joseph Harris' happiest productions, and it seems to me that it ought to make farm-life fascinating to any boy who has any sort of taste for gardening.

7 | Farm, Gardening, and Seed-growing** 90
 12 | Gardening for Pleasure, Henderson*..... 1 35
 12 | Gardening for Profit**..... 1 35
 8 | Gardening for Young and Old, Harris**..... 1 25

This is Joseph Harris' best and happiest effort. Although it goes over the same ground occupied by Peter Henderson, it particularly emphasizes thorough cultivation of the soil in preparing your ground; and this matter of adapting it to young people as well as old is brought out in a most happy vein. If your children have any sort of fancy for gardening it will pay you to make them a present of this book. It has 187 pages and 46 engravings.

3 | Farms and Clovers, with Notes on Forage Plants 20

This is by Henry A. Dreer, author of the book, "Vegetables Under Glass" that has had such a large sale of late. This little book tells how six tons of grass has been grown to the acre, and gives much other valuable matter.

10 | Greenhouse construction, by Prof. Taft**..... 1 15

This book is of recent publication, and is as full and complete in regard to the building of all glass structures as is the next book in regard to their management. Any one who builds even a small structure for plant-growing under glass will save the value of the book by reading it carefully.

15 | How to Make the Garden Pay**..... 1 35
 5 | Garden and Farm Topics, Henderson**..... 60
 5 | Gray's School and Field Book of Botany..... 1 80
 5 | Gregory on Cabbages, paper* 20
 5 | Gregory on Squashes, paper*..... 20
 5 | Gregory on Onions, paper*..... 20

The above three books, by our friend Gregory, are all valuable. The book on squashes especially is good reading for almost anybody, whether they raise squashes or not. It strikes at the very foundation of success in almost any kind of business.

1 | Handbook for Lumbermen..... 05
 10 | Household Conveniences..... 1 40

2 | How to Propagate and Grow Fruit, Green*..... 15

10 | How to Get Well and Keep Well..... 90

An exposition of the Salisbury system of curing disease by the "lean-meat diet."

2 | Injurious Insects, Cook..... 10

10 | Irrigation for the Farm, Garden, and Orchard*..... 10

By Stewart. This book, so far as I am informed, is almost the only work on this matter that is attracting so much interest, especially recently. Using water from springs, brooks, or windmills to take the place of rain, during our great drouths, is the great problem before us at the present day. The book has 274 pages and 112 cuts.

7 | Market-gardening and Farm Notes..... 75

This is by a real, live, enterprising, successful market-gardener who lives in Arlington, a suburb of Bos-

ton, Mass. Friend Rawson has been one of the foremost to make irrigation a practical success, and he now irrigates his grounds by means of a windmill and steam-engine whenever a drouth threatens to injure the crops. The book has 208 pages, and is nicely illustrated with 110 engravings.

3 | Maple Sugar and the Sugar-bush**..... 32

4 | Peabody's Webster's Dictionary..... 10
 Over 30,000 words and 250 illustrations.

5 | Manures; How to Make and How to Use Them; in paper covers..... 30

6 | The same in cloth covers..... 65

3 | Onions for Profit**..... 40

Fully up to the times, and includes both the old onion culture and the new method. The book is fully illustrated, and written with all the enthusiasm and interest that characterizes its author, T. Greiner. Even if one is not particularly interested in the business, almost any person who picks up Greiner's books will like to read them through.

1 | Our Farming, by T. B. Terry**..... 1 50

In which he tells "how we have made a run-down farm bring both profit and pleasure."

This is a large book, 6x9 inches, 367 pages, quite fully illustrated. It is Terry's first large book; and while it touches on the topics treated in his smaller handbooks, it is sufficiently different so that no one will complain of repetition, even if he has read all of Terry's little books. I should call it the brightest and most practical book on farming, before the world at the present day. The price is \$2.00 postpaid, but we have made arrangements to furnish it for only \$1.50.

We are so sure it will be worth many times its cost that we are not afraid to offer to take it back if any one feels he has not got his money's worth after he has read it. If ordered by express or freight with other goods, 10c less.

1 | Poultry for Pleasure and Profit**..... 10

8 | Practical Floriculture, Henderson*..... 1 10

10 | Profits in Poultry.* 75

2 | Practical Turkey-raising 10

By Fanny Field. This is a 25-cent book which we offer for 10 cts.; postage, 2 cts.

2 | Rats; How to Rid Farms and Buildings of them, as well as other Pests of like Character** 15

1 | Silks and the Silkworm 10

10 | Small-Fruit Culturist, Fuller 1 10

10 | Success in Market-Gardening* 90

10 | Talks on Manures* 1 35

7 | Ten Acres Enough 75

10 | The New Agriculture; or, the Waters Led Capitive (a \$1.50 book) 40

2 | Treatise on the Horse and his Diseases 10

5 | Tile Drainage, by W. I. Chamberlain 35

Fully illustrated, containing every thing of importance clear up to the present date.

The single chapter on digging ditches, with the illustrations given by Prof. Chamberlain, should alone make the book worth what it costs, to every one who has occasion to lay ten rods or more of tile. There is as much science in digging as in doing almost any thing else: and by following the plan directed in the book, one man will often do as much as two men without this knowledge. The book embraces every thing connected with the subject, and was written by the author while he was engaged in the work of digging the ditches and laying the tiles HIMSELF, for he has laid literally miles of tile on his own farm in Hudson, Ohio.

3 | Tomato Culture 35

3 | Vegetables under Glass, by H. A. Dreer**..... 20

3 | Vegetables in the Open Air 20

This is a sort of companion book to the one above. Both books are most fully illustrated, and are exceedingly valuable, especially at the very low price at which they are sold. The author, H. A. Dreer, has a greenhouse of his own that covers one solid acre, and he is pretty well conversant with all the arrangements and plans for protecting stuff from the weather, and afterward handling to the best advantage when the weather will permit out of doors.

3 | Winter Care of Horses and Cattle..... 25

This is friend Terry's second book in regard to farm matters; but it is so intimately connected with his potato-book that it reads almost like a sequel to it. If you have only a horse or cow, I think it will pay you to invest in a book. It has 44 pages and 4 cuts.

3 | Wood's Common Objects of the Microscope**.. 47

8 | What to Do and How to Be Happy While doing It, by A. I. Root 42

The A. I. Root Co., Medina, O.